

JVC

SERVICE MANUAL

COLOUR TELEVISION

AV-21B116/B, AV-V2160/B

BASIC CHASSIS

CG4

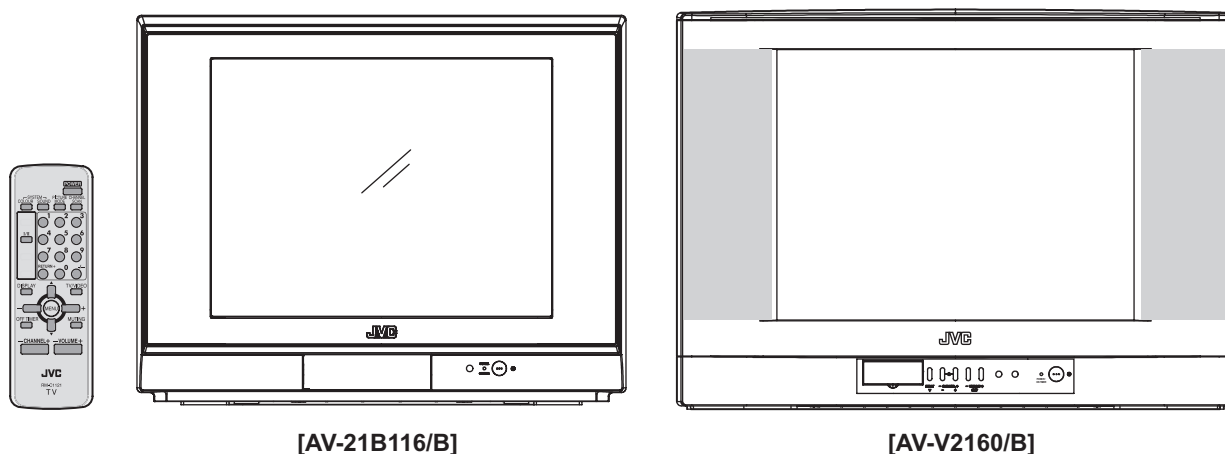


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SPECIFICATION

Items		Contents	
		AV-21B116/B	AV-V2160/B
Dimensions (W × H × D)		59.8 cm × 47.6 cm × 47.7 cm	64.9 cm × 46.6 cm × 47.4 cm
Mass		22 kg	23 kg
TV RF System		B/G, I, D/K	
Colour System		PAL SECAM	
Receiving Frequency	VHF Low VHF High UHF CATV	46.25 MHz to 140.25 MHz 147.25 MHz to 423.25 MHz 431.25 MHz to 863.25 MHz Mid (X to Z+2, S1 to S10) / Super (S11 to S20) / Hyper (S21 to S41) bands	
Intermediate Frequency	VIF	38.0 MHz (B/G, I, D/K)	
	SIF	32.5 MHz (5.5 MHz: B/G) 32MHz (6.0 MHz: I) 31.5MHz (6.5 MHz: D/K)	
Colour Sub Carrier	PAL SECAM	4.43 MHz 4.40625 MHz / 4.25 MHz	
Power Input		AC220 V to AC240 V, 50 Hz / 60 Hz	
Power Consumption		100 W (Max) / 65 W(Avg)	
Picture Tube		Visible size: 52.3 cm measured diagonally (H : 41.6 cm × V : 31.5 cm)	
High Voltage		26.5 kV±1.5kV (at zero beam current)	
Speaker		5 cm × 9 cm, Oval type × 2	6.5 cm × 13 cm, Oval type × 2
Audio Power Output		3 W (monaural)	
Aerial Input Terminal		75 Ω unbalanced, coaxial	
Input Terminal [Front / Rear]	Video	1 V(p-p), 75 Ω, RCA pin jack × 2	
	Audio	500 mV(rms) (-4 dBs), High impedance, RCA pin jack × 2	
Output Terminal [Rear]	Video	1 V(p-p), 75Ω, RCA pin jack × 1	
	Audio	500 mV(rms) (-4 dBs), Low impedance, RCA pin jack × 1	
Headphone Jack		3.5 mm mini jack × 1	
Remote Control Unit		RM-C1121 (Battery size : AA / R6 / UM-3 × 2)	

Design and specifications are subject to change without notice.

SECTION 1

PRECAUTION

1.1 SAFETY PRECAUTIONS

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (Δ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : ($\perp$) side GND, the ISOLATED (NEUTRAL) : ($\equiv$) side GND and EARTH : ($\oplus$) side GND.
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.
- (5) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B1 POWER SUPPLY).
- (6) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- (7) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k Ω 2W resistor to the anode button.

- (8) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

- (9) **Isolation Check (Safety for Electrical Shock Hazard)**
After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

a) Dielectric Strength Test

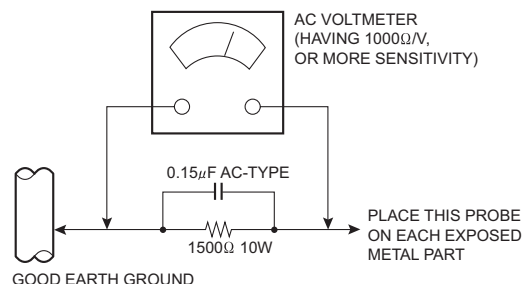
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. (. . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.) This method of test requires a test equipment not generally found in the service trade.

b) Leakage Current Check

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 Ω per volt or more sensitivity in the following manner. Connect a 1500 Ω 10W resistor paralleled by a 0.15 μ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



SECTION 2

SPECIFIC SERVICE INSTRUCTIONS

2.1 FEATURES

PICTURE MODE

This function can adjust the picture settings automatically.
There are BRIGHT, STANDARD and SOFT in the PICTURE MODE.

RETURN +

This function can set a channel you frequently view to the Return Channel and you can view that channel at any time with one-touch.

CHILD LOCK

Use this function to prevent children from operating the TV without parental consent.

VNR

This function can reduce the picture noise.

2.2 MAIN DIFFERENCE LIST

Item	AV-21B116/B	AV-V2160/B
Power Cord	Flat pin type	Round pin type
MAIN PWB	SCG-1550A-BK	SCG-1557A-BK

2.3 TECHNICAL INFORMATION

2.3.1 MAIN MI-COM (CPU) PIN FUNCTION

Pin No.	Pin name	I/O	Function	Pin No.	Pin name	I/O	Function
1	REMOCON	I	Remote control	22	PROTECT	I	Low B protect detection [Detect: H]
2	SDA2	I/O	Data for Inter IC control (For main memory)	23	P_ON/OFF	I	Main power control [ON : H]
3	SCL2	O	Clock for Inter IC control (For main memory)	24	LOCK	-	Not used
4	BUS_FREE	-	Not used	25	3.58/OTH	-	Not used
5	NC	-	Not used	26	4.5/OTH	-	Not used
6	KEY1	I	Key scan for front key (Menu CH -/+)	27	H_SYNC	I	Horizontal sync
7	KEY2	I	Key scan for front key (Vol +/-)	28	I/II	-	Not used
8	ECO IN	-	Not used	29	OSD_Ys	O	Ys (blanking) for OSD
9	AFT	I	AFT voltage for tuner	30	OSD_B	O	Blue for OSD
10	LED[POW]	-	Not used	31	OSD_G	O	Green for OSD
11	LED[TIM]	O	Liting for timer [Liting : H]	32	OSD_R	O	Red for OSD
12	GND	-	GND	33	NC	-	Not used
13	NC	-	Not used	34	RST	I	CPU reset [Reset:L]
14	NC	-	Not used	35	V_SYNC	I	Vertical sync
15	TV/V	-	Not used	36	TCLOCK	-	Not used
16	TEXT RESET	-	Not used	37	SDA1	I/O	Data for Inter IC control (For generally)
17	ACL ON/OFF	-	Not used	38	SCL1	O	Clock for Inter IC control (For generally)
18	VOL	O	Volume control	39	VDD	I	3.3V
19	A_MUTE	O	Aodio muting [Muting : H]	40	OSC1	I	System clock oscillation (4MHz)
20	NC	-	Not used	41	OSC2	O	System clock oscillation (4MHz)
21	TEXT/OTH	-	Not used	42	VSS	-	GND

SECTION 3 DISASSEMBLY

3.1 DISASSEMBLY PROCEDURE [AV-21B116/B]

3.1.1 REMOVING THE REAR COVER

- Unplug the power cord.
 - (1) Remove the 6 screws **[A]**, 1 screw **[B]** and 1 screw **[C]** as shown in Fig.1.
 - (2) Withdraw the REAR COVER toward you.

CAUTION:

When reinstalling the rear cover, carefully push it inward after inserting the MAIN PWB into the REAR COVER groove.

3.1.2 REMOVING THE MAIN PW BOARD

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the MAIN PWB by hand.
 - (2) Withdraw the MAIN PWB backward.
(If necessary, take off the wire clamp and connectors, etc.)

3.1.3 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws **[D]** as shown in Fig.1.
 - (2) Follow the same steps when removing the other hand SPEAKER.

3.1.4 CHECKING THE MAIN PW BOARD

- To check the back side of the MAIN PWB.
 - (1) Pull out the MAIN PWB. (Refer to REMOVING THE MAIN PW BOARD).
 - (2) Erect the MAIN PWB vertically so that you can easily check its back side.

CAUTIONS:

- Before turning on power, make sure that the CRT earth wire and other connectors are properly connected.
- When repairing, connect the DEG. COIL to the DEG. connector on the MAIN PWB.

3.1.5 WIRE CLAMPING AND CABLE TYING

- (1) Be sure to clamp the wire.
- (2) Never remove the cable tie used for tying the wires together.
Should it be inadvertently removed, be sure to tie the wires with a new cable tie.

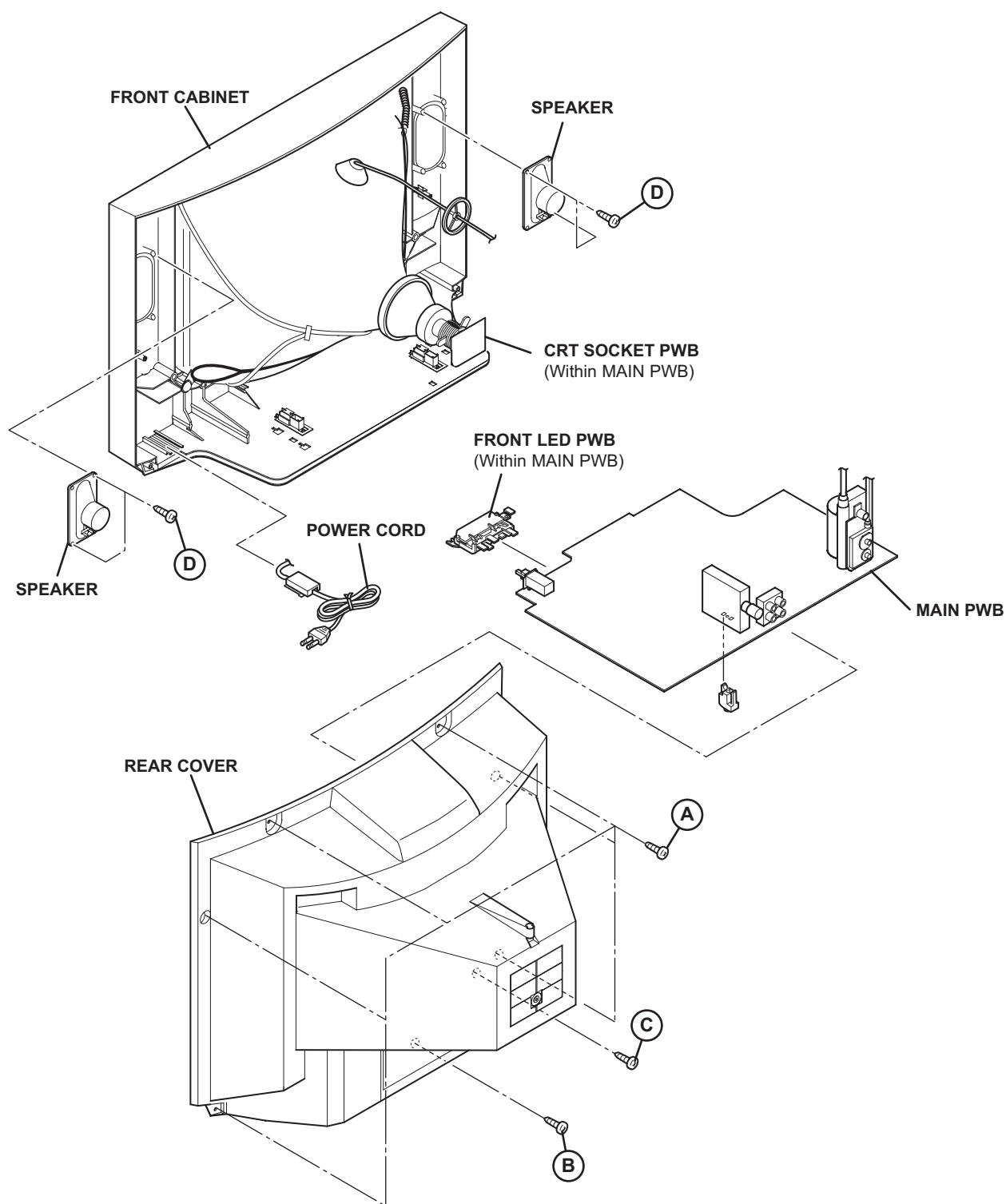


Fig.1

3.2 DISASSEMBLY PROCEDURE [AV-V2160/B]

3.2.1 REMOVING THE REAR COVER

- Unplug the power cord.
 - (1) Remove the 2 screws **[A]**, 7 screws **[B]** and 1 screw **[C]** as shown in Fig.2.
 - (2) Withdraw the REAR COVER toward you.

CAUTION:

When reinstalling the rear cover, carefully push it inward after inserting the MAIN PWB into the REAR COVER groove.

3.2.2 REMOVING THE MAIN PW BOARD

- Remove the REAR COVER.
 - (1) Slightly raise the both sides of the MAIN PWB by hand.
 - (2) Withdraw the MAIN PWB backward.
(If necessary, take off the wire clamp and connectors, etc.)

3.2.3 REMOVING THE SPEAKER

- Remove the REAR COVER.
 - (1) Remove the 2 screws **[D]** as shown in Fig.2.
 - (2) Follow the same steps when removing the other hand SPEAKER.

3.2.4 CHECKING THE MAIN PW BOARD

- To check the back side of the MAIN PWB.
 - (1) Pull out the MAIN PWB. (Refer to REMOVING THE MAIN PW BOARD).
 - (2) Erect the MAIN PWB vertically so that you can easily check its back side.

CAUTIONS:

- Before turning on power, make sure that the CRT earth wire and other connectors are properly connected.
- When repairing, connect the DEG. COIL to the DEG. connector on the MAIN PWB.

3.2.5 WIRE CLAMPING AND CABLE TYING

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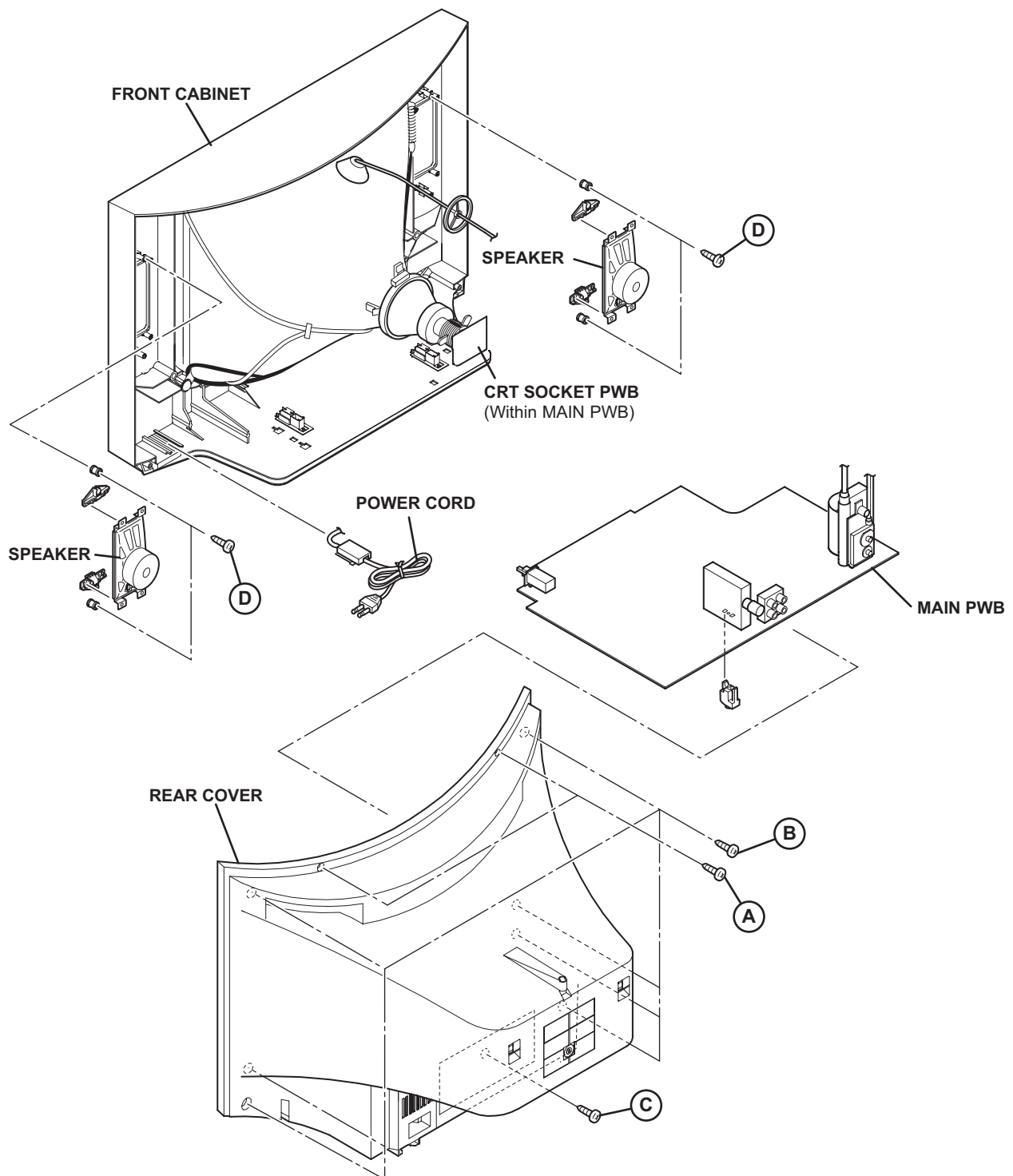


Fig.2

3.3 MEMORY IC REPLACEMENT

- This model uses the memory IC.
- This memory IC stores data for proper operation of the video and drive circuits.
- When replacing, be sure to use an IC containing this (initial value) data.

3.3.1 MEMORY IC REPLACEMENT PROCEDURE

1. Power off

Switch off the power and disconnect the power plug from the AC outlet.

2. Replace the memory IC

Be sure to use the memory IC written with the initial setting values.

3. Power on

Connect the power plug to the AC outlet and switch on the power.

4. System constant check and setting

- It must not adjust without adjustment signals.
 - (1) Press the **[DISPLAY]** key and the **[PICTURE MODE]** key of the REMOTE CONTROL UNIT simultaneously.
 - (2) The SERVICE MENU screen of Fig. 1 will be displayed.
 - (3) While the SERVICE MENU is displayed, again press the **[DISPLAY]** key and **[PICTURE MODE]** key simultaneously, and the SYSTEM CONSTANT SET screen of Fig. 2 will be displayed.
 - (4) Check the setting values of the SYSTEM CONSTANT SETTING. If the value is different, select the setting item with the **[MENU ▲/▼]** key, and set the correct value with the **[MENU - / +]** key.
 - (5) Press the **[DISPLAY]** key twice, and return to the normal screen.

5. Receiving channel setting

Refer to the OPERATING INSTRUCTIONS and set the receive channels (Channels Preset) as described.

6. User settings

Check the user setting items according to the given in page later.

Where these do not agree, refer to the OPERATING INSTRUCTIONS and set the items as described.

7. SERVICE MENU setting

Verify what to set in the SERVICE MENU, and set whatever is necessary (Fig.1).

Refer to the SERVICE ADJUSTMENT for setting.

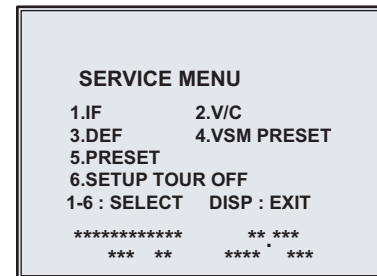


Fig.1

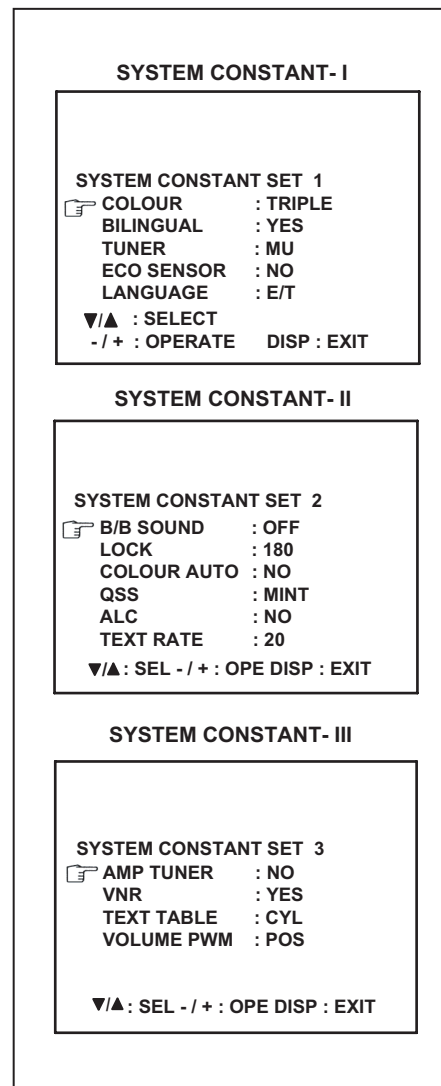
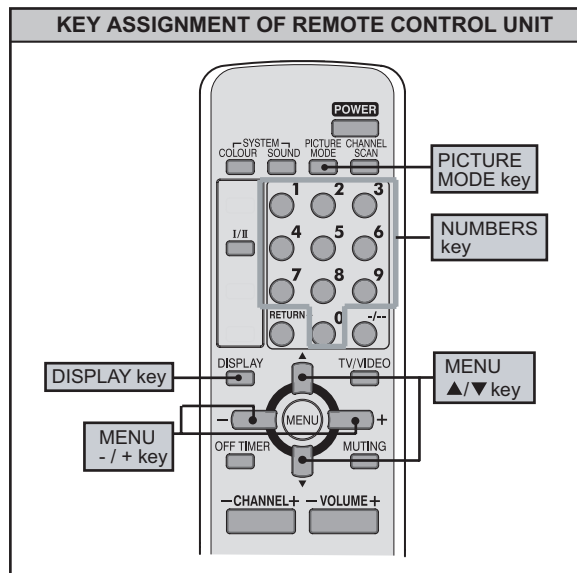


Fig.2



3.3.2 SETTINGS OF FACTORY SHIPMENT

3.3.2.1 BUTTON OPERATION

Setting item	Setting position
POWER	Off
CHANNEL	PR1
VOLUME	10

3.3.2.2 REMOTE CONTROL DIRECT OPERATION

Setting item	Setting position
CHANNEL	PR1
VOLUME	10
TV/VIDEO	TV
PICTURE MODE	BRIGHT
COLOUR SYSTEM	PAL
SOUND SYSTEM	B/G

3.3.2.3 REMOTE CONTROL MENU OPERATION

(1) MENU-1

Setting item	Setting position
INPUT	TV
ON TIMER	PR1 0:00
OFF TIMER	OFF
VNR	OFF

(2) MENU-2

Setting item	Setting position
AUTO SHUTOFF	OFF
CHILD LOCK	OFF
BLUE BACK	OFF

(3) MENU-3

Setting item	Setting position
SETUP TOUR	ON
LANGUAGE	THAI

(4) MENU-4

Setting item	Setting position		
	BRIGHT	STANDARD	SOFT
TINT	15	15	15
COLOUR	15	15	15
BRIGHT	15	15	15
CONT.	30	15	11
SHARP	15	15	12

3.3.3 SYSTEM CONSTANT SETTING

Setting item	Setting value
COLOUR	TRIPLE
BILINGUAL	YES
TUNER	MU
ECO SENSOR	NO
LANGUAGE	E / T
B/B SOUND	OFF
LOCK	180
COLOUR AUTO	NO
QSS	MINT
ALC	NO
TEXT RATE	20
AMP TUNER	NO
VNR	YES
TEXT TABLE	CYL
VOLUM PWM	POS

3.3.4 SERVICE MENU SETTING ITEMS

Setting item	Setting value	Setting item	Setting value
2. V/C	1.CUT OFF 2.DRIVE 3.BRIGHT 4.CONT. 5.COLOUR 6.TINT 7.SECAM BL ADJUST 8.SHARP [Do not adjust] 9.AMP T. SHARP [Do not adjust]	5. PRESET [Do not adjust]	Colour System 1. C-TRAP FIX 2. SHARP PEAK 3. ABL 4. GAMMA 5. Y. DELAY TIME 6. BLACK EXP START 7. C-BPF 8. CW / SCP 9. VIF DET LEVEL 11. IF AGC MIN 12. VIF AGC 13. VIF PMOD 19. VNR 20. RGB LIM 21. RGB LIMIT LEVEL 23. TEXT H. POSITION 24. READ DATA
3. DEFLECTION	1. VER. POSITION 2. HOR. POSITION 3. VER. HEIGHT 4. VER. LINEARITY 5. VER. SCURVE 6. HOR. VCO ADJUST [Do not adjust]		Sound System 10. SIF DET LEVEL 14. SIF BPF BW ADJUST 15. SIF TRAP F0 ADJUST 16. SIF TRAP F0 ADJUST 2 17. SIF -TRAP 18. SIF -BPF 22. SIF SW
4.VSM PRESET	TINT COLOUR BRIGHT CONT. SHARP		

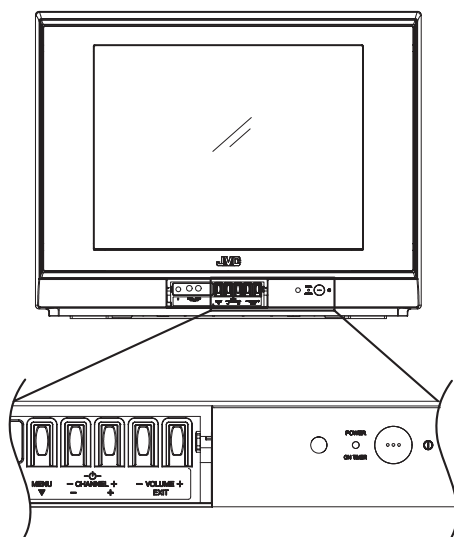
3.3.5 REPLACEMENT OF IC301 (IF V/C DECODER)

- For the IC301(IF V/C DECODER) of this model, all data are written in the micro-computer. So, write the data in the micro-computer in accordance with the following procedures before starting adjustment.

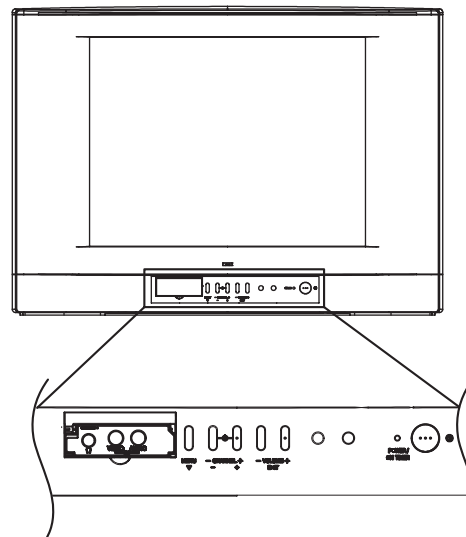
■ PROCEDURES

- Turn the POWER OFF.
- Replace the IC301 with a new one.
- While pressing **[MENU]** button and **[VOL+]** button ON the FRONT CABINET simultaneously, turn the POWER ON. When the POWER is turned ON, the data is written in the micro-computer immediately.

■ LOCATIONS OF FRONT PANEL BUTTONS



[AV-21B116/B]



[AV-V2160/B]

3.4 REPLACEMENT OF CHIP COMPONENT

3.4.1 CAUTIONS

- (1) Avoid heating for more than 3 seconds.
- (2) Do not rub the electrodes and the resist parts of the pattern.
- (3) When removing a chip part, melt the solder adequately.
- (4) Do not reuse a chip part after removing it.

3.4.2 SOLDERING IRON

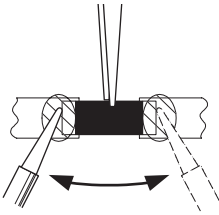
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

3.4.3 REPLACEMENT STEPS

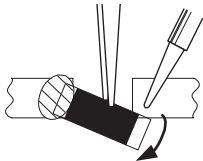
1. How to remove Chip parts

[Resistors, capacitors, etc.]

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



- (2) Shift with the tweezers and remove the chip part.

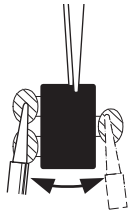


[Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



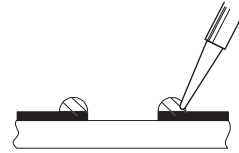
NOTE :

After removing the part, remove remaining solder from the pattern.

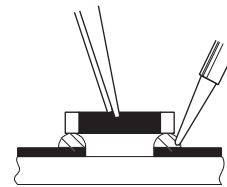
2. How to install Chip parts

[Resistors, capacitors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.

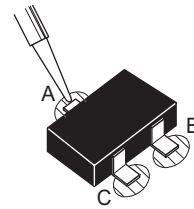


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

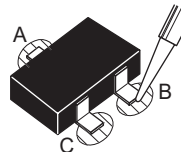


[Transistors, diodes, variable resistors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



SECTION 4 ADJUSTMENT

4.1 ADJUSTMENT PREPARATION

- (1) There are 2 ways of adjusting this TV : One is with the **REMOTE CONTROL UNIT** and the other is the conventional method using adjustment parts and components.
- (2) The adjustment using the **REMOTE CONTROL UNIT** is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.
- (3) Make sure that connection is correctly made AC to AC power source.
- (4) Turn on the power of the TV and measuring instruments for warming up for at least 30 minutes before starting adjustments.
- (5) If the receive or input signal is not specified, use the most appropriate signal for adjustment.
- (6) Never touch the parts (such as variable resistors, transformers and condensers) not shown in the adjustment items of this service adjustment.

4.2 PRESET SETTING BEFORE ADJUSTMENT

Unless otherwise specified in the adjustment items, preset the following functions with the **REMOTE CONTROL UNIT**.

Item	Preset value
PICTURE MODE	BRIGHT
TINT / COLOUR / BRIGHT / CONT. / SHARP	Centre
VNR	OFF
BLUE BACK	OFF
OFF TIMER	OFF
AUTO SHUT OFF	OFF

4.3 MEASURING INSTRUMENT AND FIXTURES

- (1) DC voltmeter (or digital voltmeter)
- (2) Oscilloscope
- (3) Signal generator
(Pattern generator : PAL / SECAM / NTSC)
- (4) Remote control unit

4.4 ADJUSTMENT ITEMS

■ CHECK ITEM

- B1 VOLTAGE check

■ TUNER / IF CIRCUIT

- IF VCO adjustment
- DELAY POINT adjustment

■ FOCUS

- FOCUS adjustment

■ DEFLECTION CIRCUIT

- V.HEIGHT / V.POSITION adjustment
- H. POSITION adjustment
- V.LINEARITY / V.S-CURVE adjustment

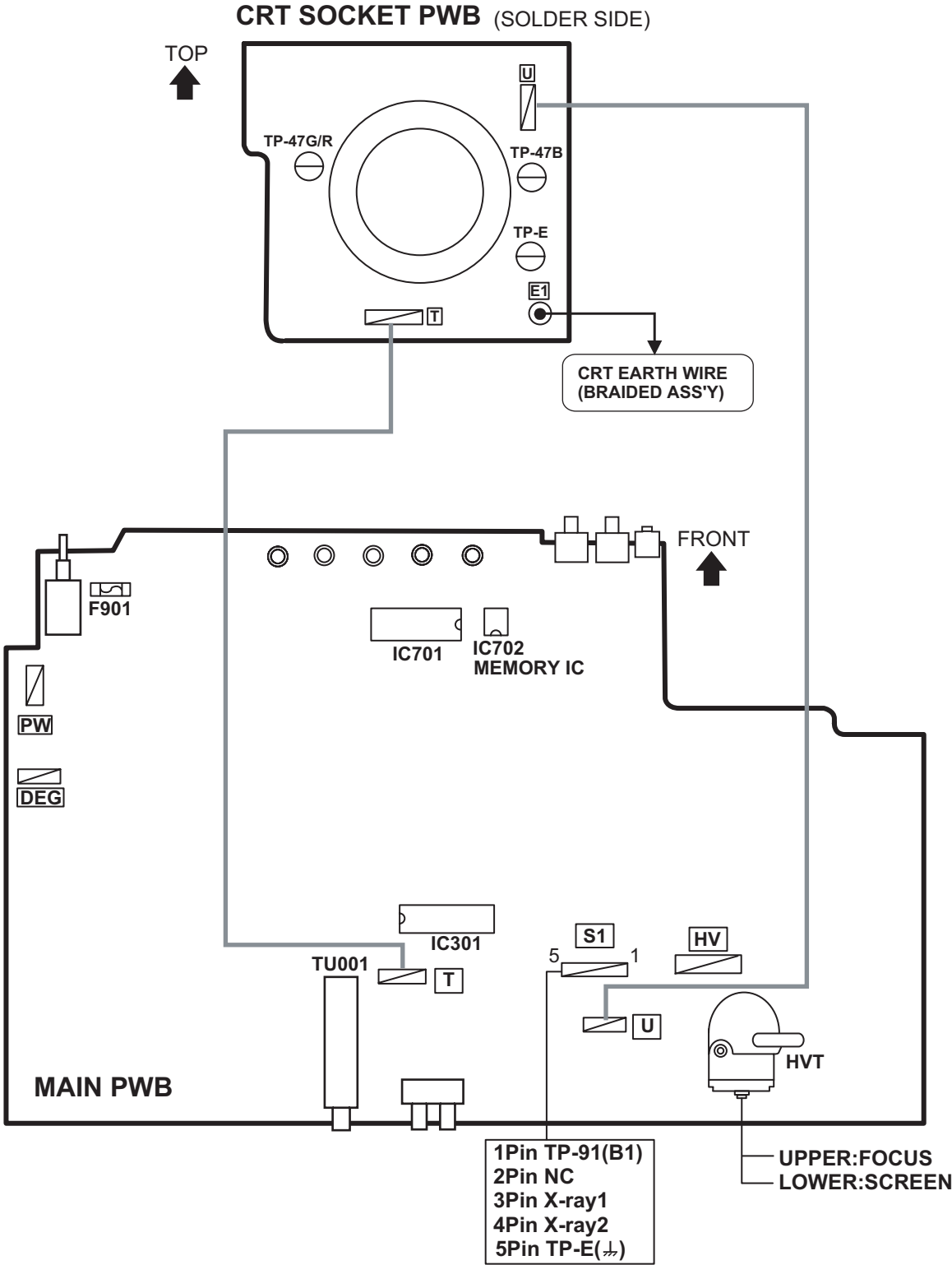
■ VIDEO CIRCUIT

- WHITE BALANCE adjustment
- SUB BRIGHT adjustment
- SUB CONTRAST adjustment
- SUB COLOUR adjustment
- SUB TINT adjustment
- SECAM BALACK OFFSET adjustment

■ VSM PRESET SETTING

- VSM PRESET setting

4.5 ADJUSTMENT LOCATIONS



4.6.7 METHOD OF SETTING

■ 1. IF

[1. VCO]

- | | |
|-----------------------|---|
| (1) [1] key | Select 1. IF . |
| (2) [1] key | Select 1. VCO . |
| (3) [MENU ▲/▼] keys | Select setting items. |
| (4) [MENU - / +] keys | Adjust the values of the items. |
| (5) [DISPLAY] key | As you press this key twice, you will return to the SERVICE MENU . |

[2. DELAY POINT]

- | | |
|-----------------------|--|
| (1) [1] key | Select 1. IF . |
| (2) [2] key | Select 2. DELAY POINT . |
| (3) [MENU - / +] keys | Set (adjust) the setting values of the setting items. |
| (4) [DISPLAY] key | When this is pressed twice, you will return to the SERVICE MENU . |

NOTE:

When the setting value has been changed, the new value will be stored in memory immediately.

■ 2. V/C, 3. DEF and 4. VSM PRESET

- | | |
|-----------------------|--|
| (1) [2] to [4] keys | Select one from 2. V/C , 3. DEF and 4. VSM PRESET . |
| (2) [MENU ▲/▼] keys | Select setting items. |
| (3) [MENU - / +] keys | Adjust the values of the items. |
| (4) [DISPLAY] key | When this is pressed, return to the SERVICE MENU . |

NOTE:

When the setting value has been changed, the new value will be stored in memory immediately.

■ 5. PRESET (Do not adjust)

■ 6. SETUP TOUR

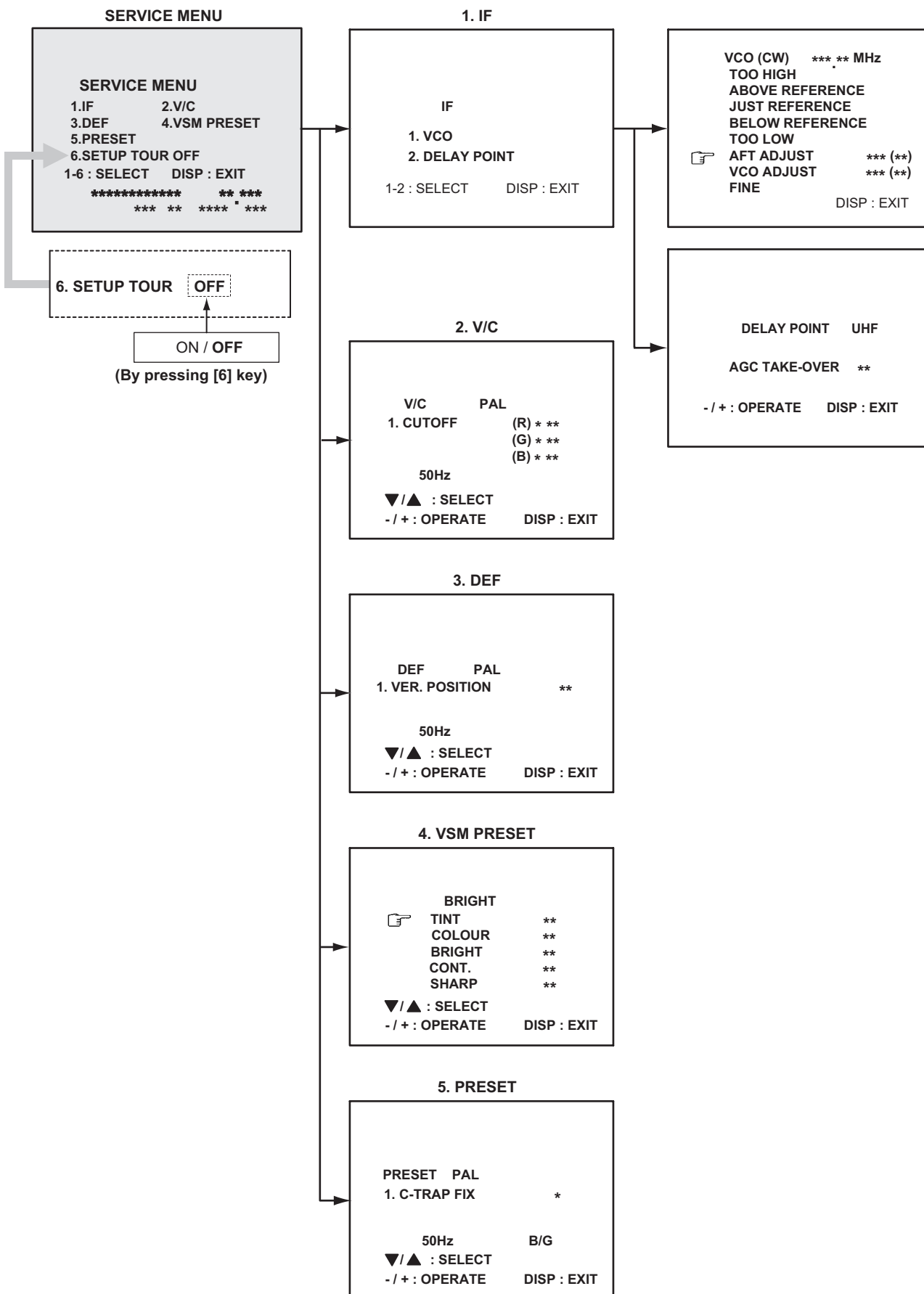
- (1) By pressing the [6] key, you can change the ON or OFF [**should be OFF**].

Should be OFF:

If it is ON, when you turn off the power and turn on a power again, the JVC's logo will be shown about 15 seconds automatically, and the SETUP TOUR starts.

- | | |
|-----------------------|------------------|
| (2) [MENU - / +] keys | Select Language. |
| (3) [MENU ▼] key | Auto Search. |

4.6.8 SERVICE MENU FLOW CHART



4.7 INITIAL SETTING VALUE OF SERVICE MENU

- Adjustment of the SERVICE MENU is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.
- Do not change the initial Setting Values of the Setting (Adjustment) items not listed in "ADJUSTMENT PROCEDURE".

[2. V/C]

Setting item		Variable range	Initial setting value			
			PAL	SECAM	NTSC 3.58	NTSC 4.43
1.CUT OFF	RED	-128 - +127	-50	-50	-50	-50
	GREEN	-128 - +127	-50	-50	-50	-50
	BLUE	-128 - +127	-50	-50	-50	-50
2.DRIVE	RED	-128 - +127	+0	+0	+0	+0
	BLUE	-128 - +127	+0	+0	+0	+0
3.BRIGHT		-128 - +127	+0	+0	+0	+0
4.CONT.		-63 - +63	+0	+0	+0	+0
5.COLOUR		-63 - +63	+0	+0	+0	+1
6.TINT	TV	-63 - +63	---	---	---	---
	VIDEO	-63 - +63	---	---	+0	-2
7.SECAM BL ADJUST		-31 - +31	+0	+0	+0	+0
8.SHARP (Do not adjust)	TV	-31 - +31	+2 (Fixed)	+2 (Fixed)	+2 (Fixed)	+2 (Fixed)
	VIDEO	-31 - +31	+15 (Fixed)	+15 (Fixed)	+15 (Fixed)	+15 (Fixed)

[3. DEFLECTION]

Setting item	Variable range	Initial setting value	
		fv : 50Hz	fv : 60Hz
1. VER. POSITION	-4 - +3	-1	-3
2. HOR. POSITION	-16 - +15	+3	+3
3. VER. HEIGHT	-64 - +63	-35	+1
4. VER. LINEARITY	-32 - +31	+15	-1
5. VER. SCURVE	-32 - +31	-32	+0
6. HOR. VCO ADJUST [Do not adjust]	-63 - +63	+0	+0

[4.VSM PRESET]

Setting item	Variable range	Initial setting value		
		BRIGHT	STANDARD	SOFT
TINT	0 - 30	15	15	15
COLOUR	0 - 30	15	15	15
BRIGHT	0 - 30	15	15	15
CONT.	0 - 30	30	15	11
SHARP	0 - 30	15	15	12

[5. PRESET]

The items in the following table, it is no requirement for adjustment.If values had changed by the miss operation, set the initial setting values in the following table.

● COLOUR SYSTEM (Do not adjust)

Setting item		Variable range	Initial setting value (Fixed value)			
			PAL	SECAM	NTSC 3.58	NTSC 4.43
1. C TRAP FIX		0 - 1	1	1	1	1
2. SHARP PEAK		0 - 1	0	0	---	---
3. ABL		0 - 1	1	1	1	1
4. GAMMA		0 - 1	0	0	0	0
5. Y. DELAY TIME	TV	0 - 3	0	2	---	---
	VIDEO	0 - 3	0	2	---	---
6. BLACK EXP START		0 - 3	3	3	3	3
7. C-BPF	TV	0 - 1	1	1	---	---
	VIDEO	0 - 1	1	1	---	---
8. CW / SCP		0 - 1	0	0	0	0
9. VIF DET LEVEL		-63 - +63	+0	+0	+0	+0
11. IF AGC MIN		0 - 1	0	0	0	0
12. VIF AGC		0 - 1	0	0	0	0
13. VIF PMOD		0 - 1	0	0	0	0
19. VNR		0 - 63	15	15	15	15
20. RGB LIM		0 - 1	1	1	1	1
21. RGB LIMIT LEVEL		0 - 7	2	2	2	2
23. TEXT H. POSITION		-16 - +15	-3	-3	-3	-3
24. READ DATA		---	---	---	---	---

● SOUND SYSTEM (Do not adjust)

Setting item		Variable range	Initial setting value (Fixed value)			
			B/G	I	D/K	M
10. SIF DET LEVEL		-7 - +7	+0	+0	+0	+0
14. SIF BPF BW ADJUST		-7 - +7	+0	+0	+0	+0
15. SIF TRAP FO ADJUST		-7 - +7	+0	+0	+0	+0
16. SIF TRAP FO ADJUST 2		-7 - +7	+0	+0	+0	+0
17. SIF -TRAP		0 - 1	0	0	0	0
18. SIF -BPF		0 - 1	0	0	0	1
22. SIF SW		0 - 1	1	1	1	0

4.8 ADJUSTMENT PROCEDURE

4.8.1 CHECK ITEM

Item	Measuring instrument	Test point	Adjustment part	Description
B1 VOLTAGE	Signal generator DC voltmeter	TP-B1 : 1-pin TP-E : 5-pin (S1 connector) [MAIN PWB]		(1) Receive a whole black signal. (2) Connect a DC voltmeter to 1-pin and 5-pin of S1 connector. (3) Make sure that the voltage is DC116.2V±2.0V.

4.8.2 TUNER / IF CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
IF VCO	Signal generator Remote control unit		[1. IF] 1. VCO	- Please use a signal generator which frequency output is correctly calibrated. (1) Receive any broadcast. (2) Select 1.IF from the SERVICE MENU. (3) Select < 1.VCO >. (4) Select VCO ADJUST with [MENU ▲/▼] key. (5) Press [MENU - / +] keys until the colour of the characters TOO HIGH changes blue to yellow. Then gradually press the [MENU - / +] keys until the TOO LOW changes yellow. At this time, confirm that the value of VCO ADJUST is near +00. (6) Select AFT ADJUST with [MENU ▲/▼] key. (7) Press [MENU - / +] keys until the characters JUST REFERENCE changes blue to yellow. (8) Press the [DISPLAY] key three times to return to normal screen.

VCO (CW) ***. ** MHz

TOO HIGH

ABOVE REFERENCE

JUST REFERENCE

BELOW REFERENCE

TOO LOW

☞ AFT ADJUST ***(**)

VCO ADJUST ***(**)

FINE

DISP : EXIT

← YELLOW ←

← JUST REFERENCE ←

Item	Measuring instrument	Test point	Adjustment part	Description
DELAY POINT (AGC)	Signal generator Remote control unit		[1. IF] 2. DELAY POINT (AGC TAKE-OVER)	(1) Receive a black and white signal (colour off). (2) Select 1. IF. (3) Select < 2. DELAY POINT > . (4) Set the setting values of the setting items as shown bellow table. (5) Then adjust the [MENU - / +] keys until video noise disappears. (6) Turn to other channels and make sure that there are no irregularities.
DELAY POINT UHF AGC TAKE-OVER ** - / + : OPERATE DISP : EXIT				
Setting Item		Variable range	Initial setting value	
DELAY POINT (AGC TAKE-OVER)		0 - 127	35	

4.8.3 FOCUS

Item	Measuring instrument	Test point	Adjustment part	Description
FOCUS	Signal generator		FOCUS VR [In HVT]	(1) Receive a crosshatch signal. (2) While watching the screen, adjust the FOCUS VR to make the vertical and horizontal lines as fine and sharp as possible. (3) Make sure that when the screen is darkened, the lines remain in good focus.

4.8.4 DEFLECTION CIRCUIT

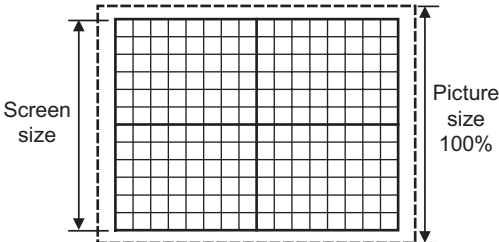
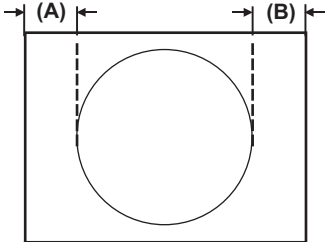
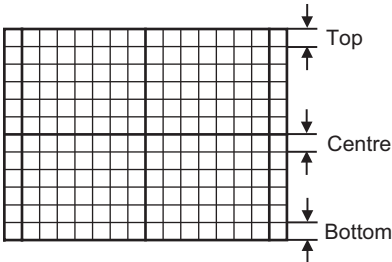
- There are 2 modes of adjustment (setting value) 50Hz mode and 60Hz mode, depending upon the kind of signals (vertical frequency 50Hz / 60Hz).
- When adjusted in 50Hz mode and 60Hz mode will be automatically set.

The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.

- Make sure that the adjustment is properly done on the screen of 60Hz mode.

NOTE:

- Adjust to make both 50Hz & 60Hz are the same v. size and fine straight line.
- When adjust again, adjust 50Hz mode first.
- When adjust in 60Hz mode, only 60Hz mode is adjust.

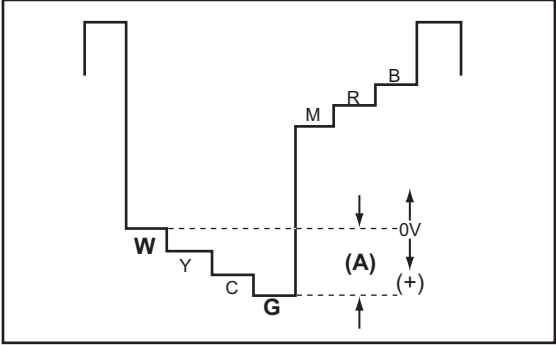
Item	Measuring instrument	Test point	Adjustment part	Description
V. HEIGHT / V. POSITION	Signal generator Remote control unit		[3. DEF] 1. VER. POSITION 3. VER. HEIGHT	(1) Receive a crosshatch signal. (2) Select 3. DEF from the SERVICE MENU. (3) Select < 1. VER. POSITION >. (4) Set the initial setting value of < 1. VER. POSITION >. (5) Adjust < 1. VER. POSITION > to make the vertical centre fall on the display centre. (6) Select < 3. VER. HEIGHT >. (7) Set the initial setting value of < 3. VER. HEIGHT >. (8) Adjust < 3. VER. HEIGHT > to make the vertical screen size be 92% of the picture size.
 Fig.1				
H. POSITION	Signal generator Remote control unit		[3. DEF] 2. HOR. POSITION	(1) Receive a circle pattern signal. (2) Select 3. DEF from the SERVICE MENU. (3) Select < 2. HOR. POSITION >. (4) Set the initial setting value of < 2. HOR. POSITION >. (5) Adjust < 2. HOR. POSITION > to be equal the width of (A) and (B) as shown in Fig.2.
 Fig.2				
V.LINEARITY / V.S-CURVE	Signal generator Remote control unit		[3. DEF] 4. VER. LIN. 5. VER. SCURVE	• If the vertical linearity is noticeably deteriorated, perform the following steps. (1) Receive a crosshatch signal. (2) Select 3. DEF from the SERVICE MENU. (3) Select < 4. VER. LIN. >. (4) Set the initial setting value of < 4. VER. LIN. >. (5) Select < 5. VER. SCURVE >. (6) Set the initial setting value of < 5. VER. SCURVE >. (7) Adjust < 4. VER. LIN. > and < 5. VER. SCURVE > so that the space of upper and lower lines as shown in Fig.3 on TOP, CENTRE and BOTTOM become uniform.
 Fig.3				

4.8.5 VIDEO CIRCUIT

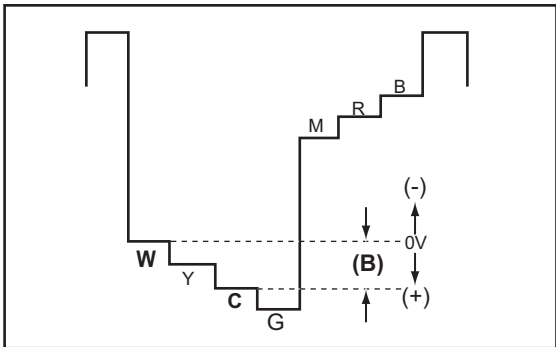
The setting (adjustment) using the REMOTE CONTROL UNIT is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values. Do not change the initial setting values of the setting items not listed in "ADJUSTMENT PROCEDURE".

Item	Measuring instrument	Test point	Adjustment part	Description
WHITE BALANCE (LOW LIGHT)	Signal generator Remote control unit		[2.V/C] 1. CUT OFF (R) 1. CUT OFF (G) 1. CUT OFF (B) SCREEN VR [IN HVT]	(1) Receive a black and white signal (colour off). (2) Select 2. V/C from the SERVICE MENU. (3) Select < 1. CUT OFF >. (4) Set the initial setting value of < 1. CUT OFF >. (5) Press the [1] key to show the single horizontal line on screen. (6) Turn the SCREEN VR fully counter-clockwise, then slowly turn it clockwise to where one of a red, blue or green colour is faintly visible. (7) Adjust the two colors which did not appear until the single horizontal line that is displayed becomes white using the [4] to [9] keys. (8) Turn the SCREEN VR to where the single horizontal line glows faintly. (9) Press the [2] key to turn off the single horizontal line. (10) Press the [DISPLAY] key twice to return to the normal screen.
KEY ASSIGNMENT OF REMOTE CONTROL UNIT				
WHITE BALANCE (HIGH LIGHT)	Signal generator Remote control unit		[2.V/C] 2. DRIVE (R) 2. DRIVE (B)	(1) Receive a black and white signal (colour off). (2) Select 2. V/C from the SERVICE MENU. (3) Select < 2. DRIVE >. (4) Set the initial setting value of < 2. DRIVE >. (5) Adjust the screen until it becomes white using the [4] , [6] , [7] and [9] keys. (6) Press the [DISPLAY] key twice to return to the normal screen.
KEY ASSIGNMENT OF REMOTE CONTROL UNIT				
SUB BRIGHT	Remote control unit		[2. V/C] 3. BRIGHT	(1) Receive any broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select < 3. BRIGHT >. (4) Set the initial setting value of < 3. BRIGHT >. (5) If the brightness is not the best with the initial setting value, make fine adjustment until you get the best brightness.
SUB CONTRAST	Remote control unit		[2. V/C] 4. CONT.	(1) Receive any broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select < 4. CONT >. (4) Set the initial setting value of < 4. CONT >. (5) If the contrast is not the best with the initial setting value, make fine adjustment until you get the best contrast.

Item	Measuring instrument	Test point	Adjustment part	Description
SUB COLOUR	Remote control unit		[2. V/C] 5. COLOUR (PAL / SECAM / NTSC)	[Method of adjustment without measuring instrument] PAL COLOUR (1) Receive a PAL broadcast. (2) Select 2. V/C from the SERVICE MENU. (3) Select < 5. COLOUR >. (4) Set the initial setting value of < 5. COLOUR >. (5) If the colour is not the best with the initial setting value, make fine adjustment until you get the best colour. SECAM COLOUR (1) Receive a SECAM broadcast. (2) Make fine adjustment of SECAM COLOUR as previously. NTSC 3.58 COLOUR (1) Receive a NTSC 3.58MHz broadcast. (2) Make similar fine adjustment of NTSC 3.58 COLOUR as previously. NTSC 4.43 COLOUR (1) When NTSC 3.58 adjustment completed, NTSC 4.43 will be automatically set at the respective values.
	Signal generator Oscilloscope Remote control unit	TP-47G/R TP-E [CRT SOCKET PWB]	[2. V/C] 5. COLOUR (PAL / SECAM / NTSC)	[Method of adjustment using measuring instrument] PAL COLOUR (1) Receive a PAL full field colour bar signal (75% white). (2) Select 2. V/C from the SERVICE MENU. (3) Select < 5. COLOUR >. (4) Set the initial setting value of < 5. COLOUR >. (5) Connect the oscilloscope between TP-47G/R and TP-E. (6) Adjust PAL COLOUR to bring the value of (A) in the voltage table. SECAM COLOUR (1) Receive a SECAM full field colour bar signal (75% white). (2) Set the initial setting value of SECAM COLOUR . (3) Adjust SECAM COLOUR to bring the value of (A) in the voltage table. NTSC 3.58 COLOUR (1) Receive a NTSC 3.58 full field colour bar signal (75% white). (2) Set the initial setting value of NTSC 3.58 COLOUR. (3) Adjust NTSC 3.58 COLOUR to bring the value of (A) in the voltage table. NTSC 4.43 COLOUR (1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.



MODEL	Voltage setting (A)			
	PAL	SECAM	NTSC3.58	NTSC4.43
AV-21B116/B AV-V2160/B	+12V	+6V	+8V (VDO)	---

Item	Measuring instrument	Test point	Adjustment part	Description																						
SUB TINT	Signal generator Remote control unit		[2. V/C] 6. TINT	[Method of adjustment without measuring instrument] NTSC 3.58 TINT (1) Receive a NTSC 3.58 full field colour bar signal (75% white). (2) Select 2. V/C from the SERVICE MENU. (3) Select < 6. TINT > . (4) Set the initial setting value of < 6. TINT > . (5) If you cannot get the best tint with the initial setting value, make fine adjustment until you get the best tint. NTSC 4.43 TINT (1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.																						
	Signal generator Oscilloscope Remote control unit	TP-47G/R TP-E [CRT SOCKET PWB]	[2. V/C] 6. TINT	[Method of adjustment using measuring instrument] NTSC 3.58 TINT (1) Receive a NTSC 3.58 full field colour bar signal (75% white). (2) Select 2. V/C from the SERVICE MENU. (3) Select < 6. TINT > . (4) Set the initial setting value of < 6. TINT > . (5) Connect the oscilloscope between TP-47G/R and TP-E. (6) Adjust NTSC 3.58 TINT to bring the value of (B) in the voltage table in the left. NTSC 4.43 TINT (1) When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.																						
 <table><tr><th rowspan="2">MODEL</th><th colspan="2">Voltage setting (B)</th></tr><tr><th>NTSC3.58</th><th>NTSC4.43</th></tr><tr><td>AV-21B116/B AV-V2160/B</td><td>+6V (VDO)</td><td>---</td></tr></table>					MODEL	Voltage setting (B)		NTSC3.58	NTSC4.43	AV-21B116/B AV-V2160/B	+6V (VDO)	---														
MODEL	Voltage setting (B)																									
	NTSC3.58	NTSC4.43																								
AV-21B116/B AV-V2160/B	+6V (VDO)	---																								
SECAM BLACK OFFSET	Signal generator Remote control unit		[2. V/C] 7. SECAM BL ADJUST	(1) Input a SECAM full field colour bar signal. (2) Select 2. V/C from the SERVICE MENU. (3) Select < 7. SECAM BL ADJUST > . (4) Set the initial setting value of < 7. SECAM BL ADJUST > . (5) Switch the [1] key (colour OFF) and [2] key (colour ON) and make sure that there is no colour on the black and white screen. (6) If the black and white screen is not best with the initial setting value, make fine adjustment until you get the best black and white screen. (7) While watching the screen, adjust the value to be the same colour between ON & OFF by [1] or [2] key. (8) Press the [DISPLAY] key twice to return to the normal screen.																						
KEY ASSIGNMENT OF REMOTE CONTROL UNIT <table><tr><td rowspan="2">COLOUR ON</td><td>1</td><td>2</td><td>3</td></tr><tr><td></td><td></td><td></td></tr><tr><td rowspan="2">COLOUR OFF</td><td>4</td><td>5</td><td>6</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td>7</td><td>8</td><td>9</td></tr><tr><td></td><td></td><td></td><td></td></tr></table>					COLOUR ON	1	2	3				COLOUR OFF	4	5	6					7	8	9				
COLOUR ON	1	2	3																							
COLOUR OFF	4	5	6																							
	7	8	9																							

4.8.6 VSM PRESET SETTING

Item	Measuring instrument	Test point	Adjustment part	Description
VSM PRESET	Remote control unit		[4. VSM PRESET] TINT COLOUR BRIGHT CONT. SHARP	(1) Select 4. VSM PRESET from the SERVICE MENU. (2) Set the PICTURE MODE to BRIGHT. (3) Select < TINT >. (4) Set the initial setting value of < TINT > as shown in the below table. (5) Select < COLOUR > to < SHARP > in turn, and set the values. (6) Respectively select the " SOFT " and " STANDARD ". Make similar adjustment as same step as above.
BRIGHT  TINT ** COLOUR ** BRIGHT ** CONT. ** SHARP ** ▼ / ▲ : SELECT - / + : OPREATE DISP : EXIT				

[4.VSM PRESET]

Setting item	Variable range	Initial setting value		
		BRIGHT	STANDARD	SOFT
TINT	0 - 30	15	15	15
COLOUR	0 - 30	15	15	15
BRIGHT	0 - 30	15	15	15
CONT.	0 - 30	30	15	11
SHARP	0 - 30	15	15	12

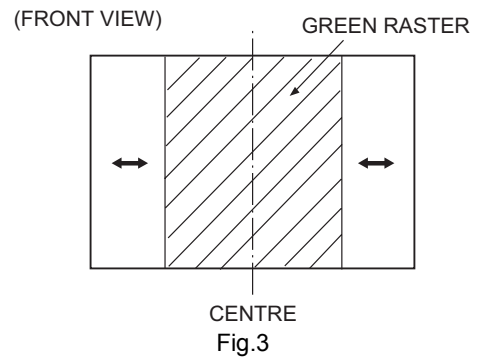
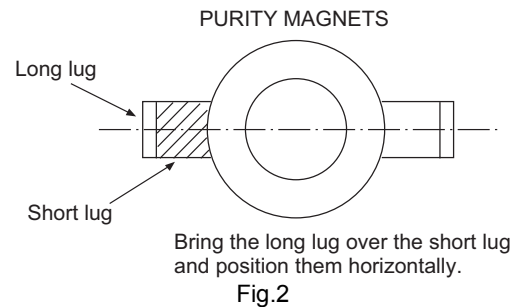
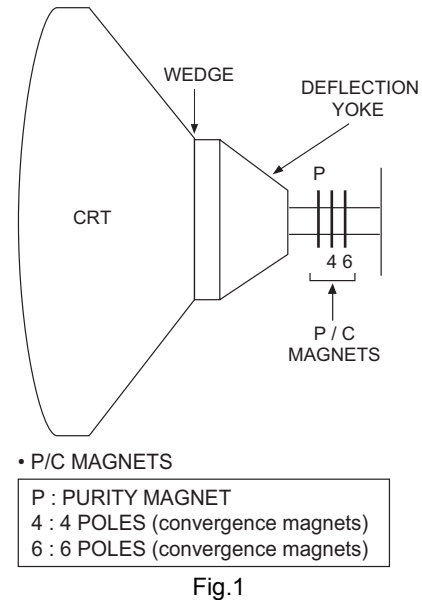
4.8.7 PURITY AND CONVERGENCE

■ PURITY ADJUSTMENT

Note:

The final adjustment of CONVERGENCE must be done after the FOCUS adjustment. (CONVERGENCE is changed by FOCUS adjustment.)
When makes difference by FOCUS adjustment, should be reconfirming PURITY adjustment.

- (1) Demagnetize CRT with the demagnetizer.
- (2) Loosen the retainer screw of the deflection yoke.
- (3) Remove the wedges.
- (4) Input a green raster signal from the signal generator, and turn the screen to green raster.
- (5) Move the deflection yoke backward.
- (6) Bring the long lug of the purity magnets on the short lug and position them horizontally. (Fig.2)
- (7) Adjust the gap between two lugs so that the GREEN RASTER will come into the centre of the screen. (Fig.3)
- (8) Move the deflection yoke forward, and fix the position of the deflection yoke so that the whole screen will become green.
- (9) Insert the wedge to the top side of the deflection yoke so that it will not move.
- (10) Input a crosshatch signal.
- (11) Verify that the screen is horizontal.
- (12) Input red and blue raster signals, and make sure that purity is properly adjusted.

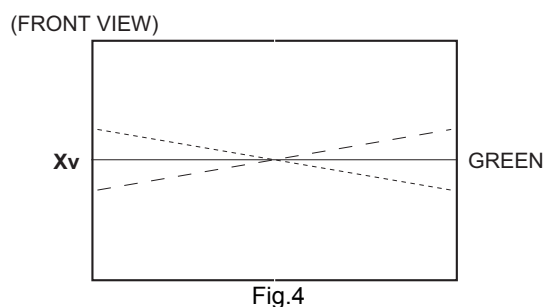
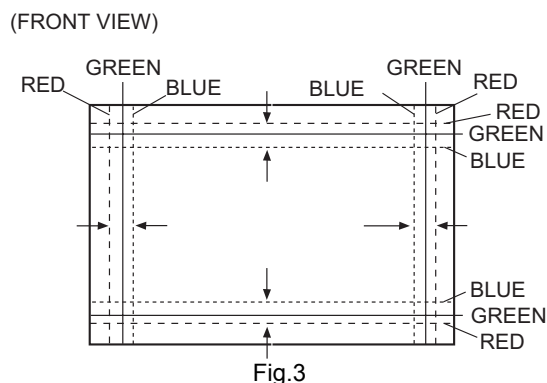
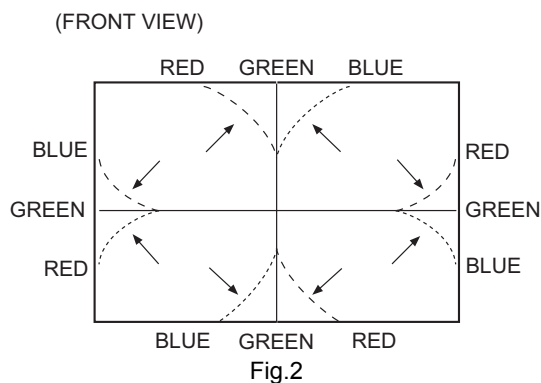
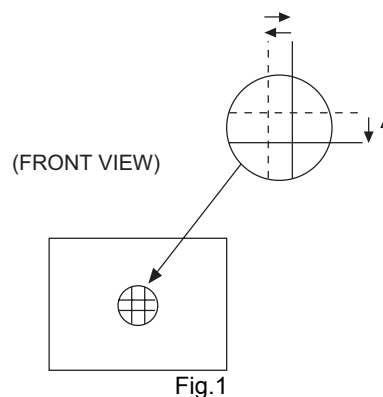


■ STATIC CONVERGENCE ADJUSTMENT

- (1) Input a crosshatch signal.
- (2) Using 4-pole convergence magnets, overlap the red and blue lines in the centre of the screen (Fig.1) and turn them to magenta (red/blue).
- (3) Using 6-pole convergence magnets, overlap the magenta (red/blue) and green lines in the centre of the screen and turn them to white.
- (4) Repeat 2 and 3 above, and make best convergence.

■ DYNAMIC CONVERGENCE ADJUSTMENT

- (1) Move the deflection yoke up and down and overlap the lines in the periphery. (Fig. 2)
 - (2) Move the deflection yoke left to right and overlap the lines in the periphery. (Fig. 3)
 - (3) Repeat 1 and 2 above, and make best convergence.
 - (4) Adjust XV by XV coil. (Fig.4)
- After adjustment, fix the wedge at the original position. Fasten the retainer screw of the deflection yoke. Fix the P/C magnets with glue.



SECTION 5 TROUBLESHOOTING

This service manual does not describe TROUBLESHOOTING.



Victor Company of Japan, Limited
Display Category 12, 3-chome, Moriya-cho, Kanagawa-ku, Yokohama-city, Kanagawa-prefecture, 221-8528, Japan

(No.YA417)



Printed in Japan
VPT



COLOUR TELEVISION

INSTRUCTIONS

Thank you for buying this JVC colour television.
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.

AV-14F116

AV-21B116

AV-21C116

AV-21D116

AV-21V116

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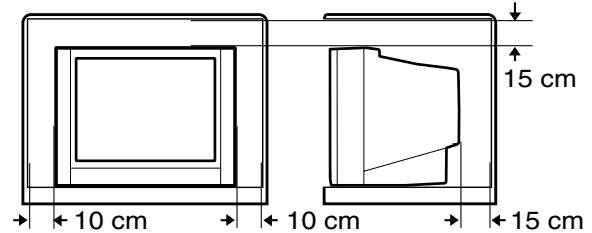
Safety precautions

WARNING

- To prevent fire or shock hazard, do not expose the TV to rain or moisture.

CAUTION

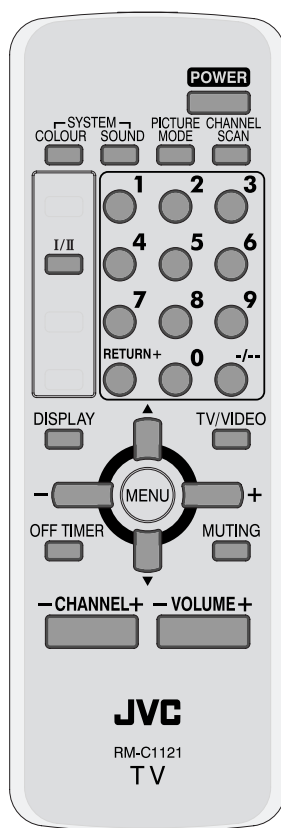
- Operate only from the power source indicated on the rear of the TV.
- Avoid damaging the power cord and mains plug. When you unplug the TV, pull it out by the mains plug. Do not pull on the power cord.
- Never block or cover the cabinet openings for ventilation. Never install the TV where good ventilation is unattainable. When installing this TV, leave spaces for ventilation around the TV more than the minimum distances shown in the diagram.
- Do not allow objects or liquid into the cabinet openings.
- In the event of a fault, unplug the TV and call a service technician. Do not attempt to repair it by yourself or remove the rear cover.
- The surface of the TV screen is easily damaged. Be very careful with it when handling the TV. Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully. Never use any cleaner or detergent on it.
- This TV can be turned on/ off power by connecting/ disconnecting the AC Plug into AC outlet. While this TV is being installed, enough space should be reserved for connecting/ disconnecting the AC Plug into AC outlet by hand.



Preparation

1 Confirm which remote control you have

RM-C1121



2 Inserting the batteries

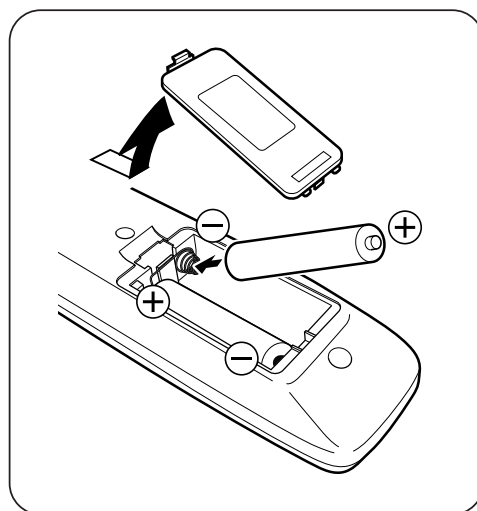
Correctly insert two batteries, observing the $\oplus$ and $\ominus$ polarities and inserting the $\ominus$ end first.

CAUTION:

Follow the cautions printed on the batteries.

Notes:

- Use AA/R6/UM-3 dry cell batteries.
 - If the remote control does not work properly, fit new batteries.
- The supplied batteries are for testing, not regular use.



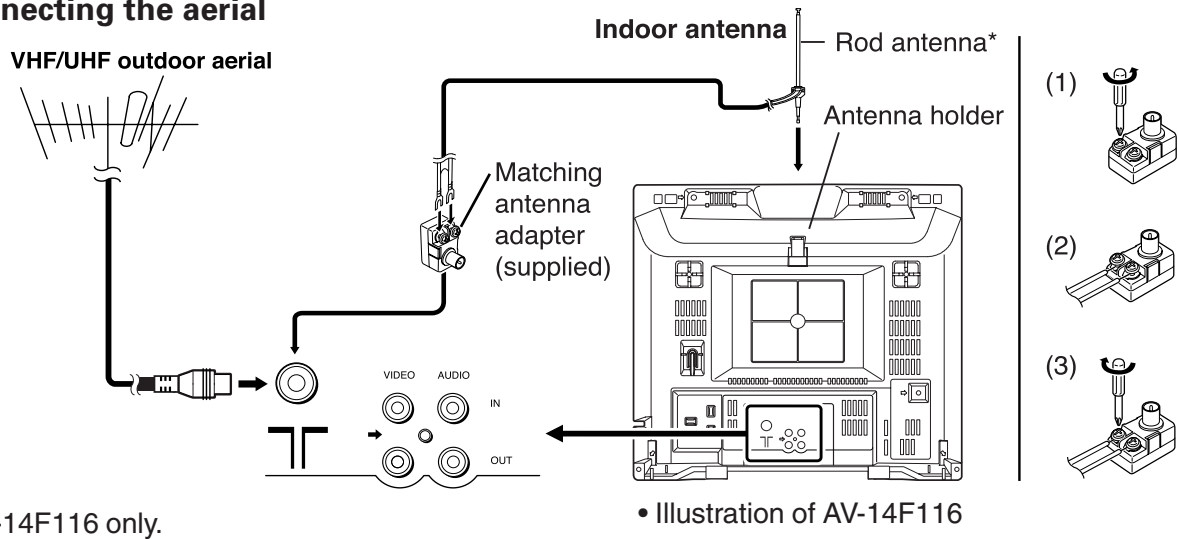
Preparation

3 Connecting the aerial and external devices

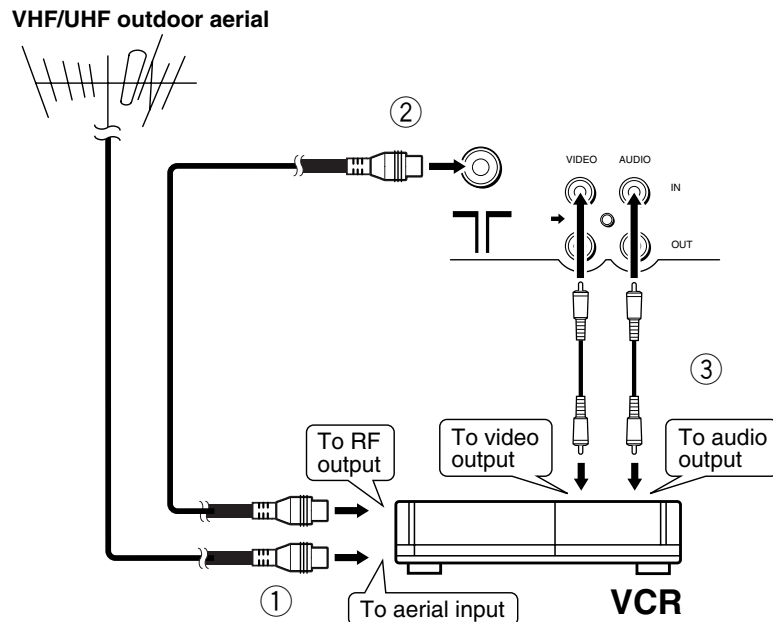
- For further details, refer to the manuals provided with the devices you are connecting.
- Connecting cables are not supplied.
- The front and rear AUDIO/VIDEO input jacks are directly connected so that input to either jack is output through both. You cannot provide input to both the front and rear jacks at the same time. Disconnect one input, or use one of the jacks as an output jack only (for monitoring or recording).

■ Connecting the aerial and VCR

Connecting the aerial



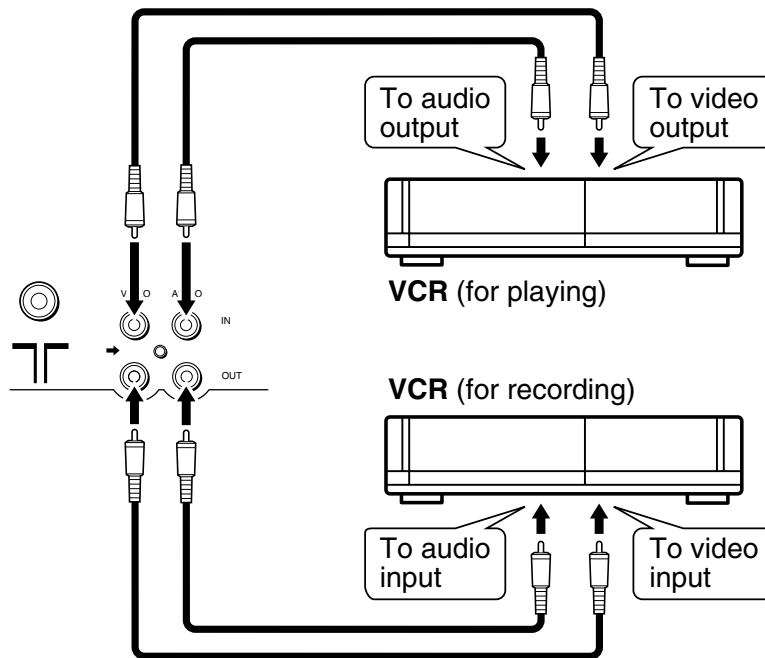
Connecting the aerial and VCR



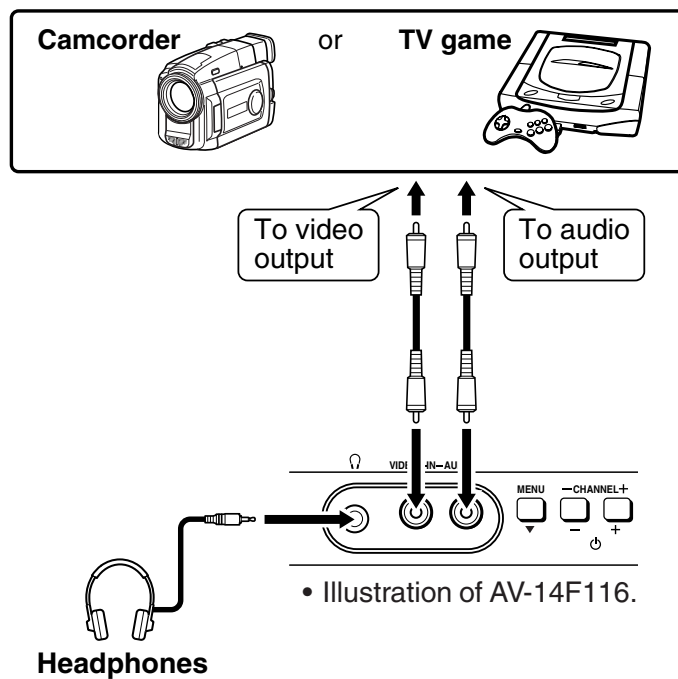
• Illustration of AV-14F116.

Preparation

■ Connecting other external devices



• Illustration of AV-14F116.



• Illustration of AV-14F116.

- Use the headphones with a stereo mini jack (3.5 mm in diameter). When you connect the headphones, the TV speakers go off.

Preparation

4 Connecting the power cord

Connect the power cord to the AC outlet.

Operate only from the power source indicated on the rear of the TV.

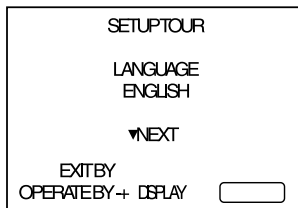
5 SETUP TOUR

When the TV is first turned on it enters the SETUP TOUR mode, and the JVC logo is displayed. Follow the instructions on the on-screen display to perform the SETUP TOUR.

- In case of resetting that the reason for such as removal, you can set the SETUP TOUR function on the “MENU 3” menu. For details, see page 13.

1 Press the Main power button on the TV.

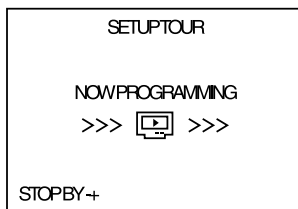
The POWER lamp or POWER/ON TIMER lamp lights. After the JVC logo has been displayed, the TV automatically switches to the language setting mode.



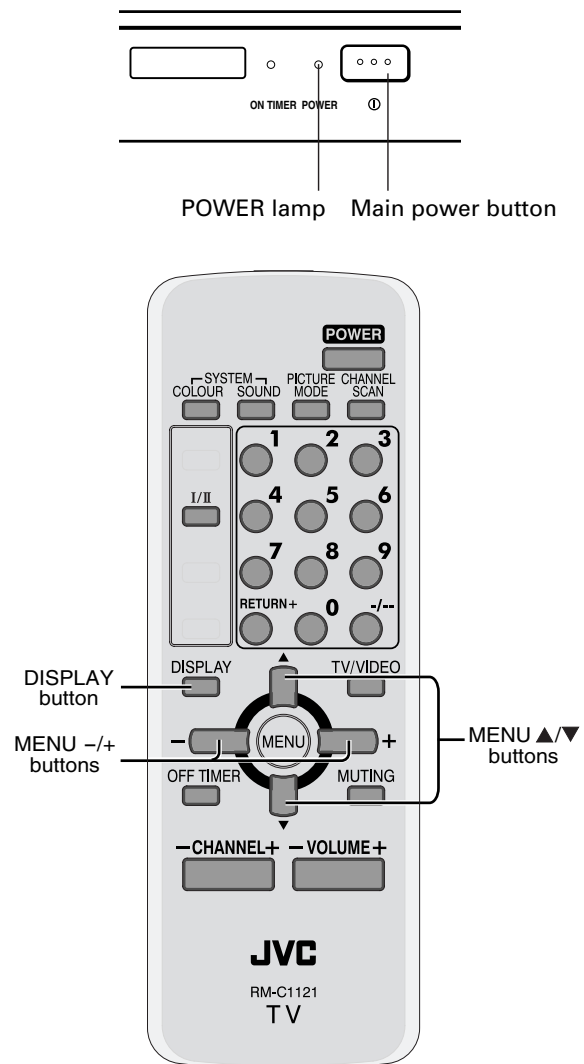
2 Press the MENU -/+ buttons to select the on-screen language.

3 Press the MENU ▼ button.

The AUTO PROGRAMMING function will start and the indicator blinks.



• Illustration of AV-14F116

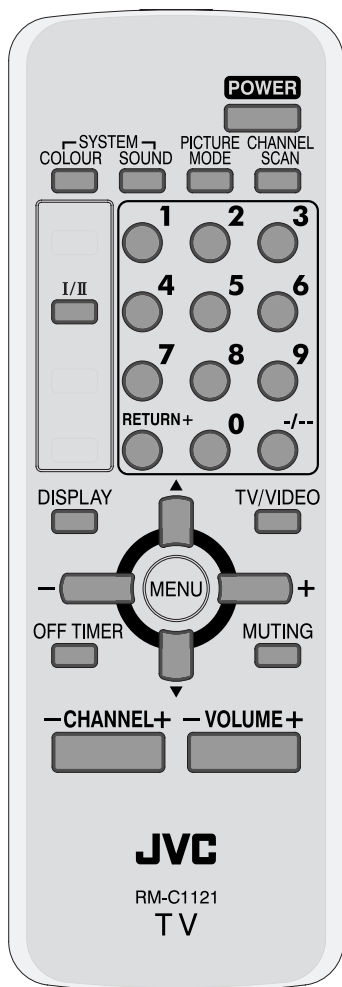


- To stop the AUTO PROGRAMMING function, press the MENU -/+ buttons. When you press stop, it will display “SETUP TOUR THANK YOU!”.

When all the TV channels that can be received on your TV have been preset, the display goes out and the AUTO PROGRAMMING function operation is completed.

- If a TV channel you want to view is not set to the channel, set it with the MANUAL CH PRESET function. For details, see page 14.

Basic operation



1 Press the **POWER** button to turn your TV on.

- If your TV does not turn on, press the Main power button on the TV then press the POWER button again.
- You can also turn on your TV by pressing any of the following buttons;
 - the CHANNEL $\pm$ button
 - the Number buttons
 - the TV/VIDEO button

2 Select a channel.

■ Press the CHANNEL $\pm$ button.

- Up/down selection cannot be selected for channels to which the SKIP has been set to “YES”. See page 15.

■ Press the Number buttons to enter the channel number.

- If you want to enter a two-digit number, press the --/-- button to select the two digit mode “--”, then enter the channel number.

3 Press the **VOLUME $\pm$** button to adjust the sound.

4 To turn your TV off, press the **POWER** button.

- We recommend that you press the Main power button on the TV to turn the main power off if you do not plan to use your TV for a long time or if you wish to save energy.

If the picture is not clear:

Press the COLOUR SYSTEM button to select another colour system, see page 8.

If the sound is not clear:

Press the SOUND SYSTEM button to select another sound system, see page 8.

Viewing Images from an External Device:

Press the TV/VIDEO button to select the VIDEO mode.

- You can also use the INPUT function to select the VIDEO mode. For details, refer to page 11.

Remote control buttons and functions

PICTURE MODE button

You can select one of three picture adjustment settings as you like.

Press this button to select a mode.

BRIGHT:

Heightens contrast and sharpness.

STANDARD:

Standardizes picture adjustments.

SOFT:

Softens contrast and sharpness.

- Pressing this button returns all the picture settings in the "MENU 4" to their default settings.

COLOUR SYSTEM button

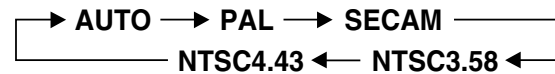
If the picture is not clear or no colour appears, change the current colour system to another colour system.

Press this button to select the colour system.

In TV mode (channel 1 to 99 and AV):



In VIDEO mode:



AUTO:

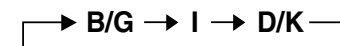
Automatic colour system selection.

- If the picture is not normal in the AUTO mode, change the AUTO mode to another colour system.

SOUND SYSTEM button

If the sound is not clear even when the picture appears normal, change the current sound system to another sound system.

Press this button to select the sound system.



- You cannot select any sound system when in a VIDEO mode.

I/II button

You can select one of the two bilingual sounds in an A2 stereo programme's bilingual programme. Press the A2 Bilingual button to select a bilingual sound.

I : Bilingual I sound

II : Bilingual II sound

- The A2 Bilingual function has no effect on stereo programmes of the A2 stereo broadcast programme type, although an A2 Bilingual function indicator will appear on the screen.
- The A2 Bilingual function has no effect on programmes other than A2 stereo broadcast programme type, although an A2 Bilingual function indicator will appear on the screen.
- The A2 Bilingual function has no effect in Video mode, although an A2 Bilingual function indicator will appear on the screen.

Remote control buttons and functions

DISPLAY button

You can continuously display the current channel number or VIDEO mode on the screen.

Press this button.

To turn the display off, press this button again.

- When selecting a channel or VIDEO mode with no input signal, indication of selected channel or VIDEO mode becomes fixed on the screen.

RETURN + button

You can set a channel you frequently view to the Return Channel and you can view that channel at any time with one-touch.

To set the channel to the Return Channel:

- 1 **Select the channel you want to set to the Return Channel.**
- 2 **Press this button and hold until the message "RETURN PLUS PROGRAMMED!" appears.**

- When you turn off the TV, the Return Channel setting is cancelled.

To view the Return Channel:

Press this button.

- You can view two channels (current channel and Return Channel) alternately by pressing this button.

To cancel the Return Channel setting:

Press this button and hold until the message "RETURN PLUS CANCELLED!" appears.

If no channel is set to the Return Channel:

You can view the channel selected right before the current channel by pressing this button.

CHANNEL SCAN button

You can quickly view all TV channels programmes that you can view on your TV, and search for the programme you want to view.

- 1 **Press this button to start scanning TV channels.**

The TV channel programmes are each displayed for several seconds.

- The programmes of TV channels for which the SKIP function is set to "YES" are not displayed. (See page 15.)

- 2 **When you find the programme you want to view, press this button again to stop scanning.**

MUTING button

You can turn the sound off instantly.

Press this button.

To turn the sound on, press this button again.

OFF TIMER button

You can set the TV to automatically turn off after a set time.

Press this button to select the period of time.

- You can set the period of time to a maximum of 120 minutes in 10 minute increments.
- 1 minute before the OFF TIMER function turns off the TV, "GOOD NIGHT!" appears.

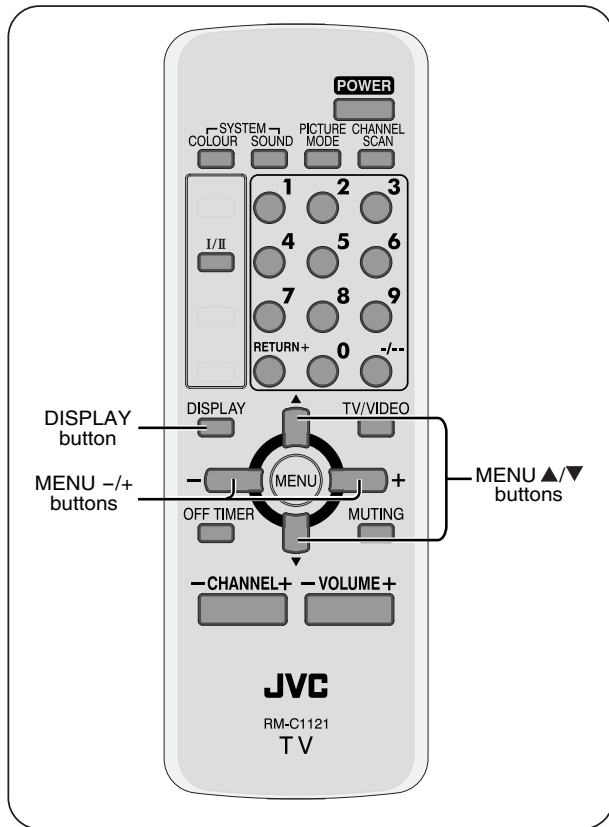
To display the remaining time, press this button once.

To cancel the OFF TIMER function, press this button to set the period of time to 0.

- The OFF TIMER function will not turn off the TV's main power.

Using the TV's menus

This TV has a number of functions you can operate using the menus. To use all your TV's functions fully, you need to understand how to use the menus.



2 Repeatedly press the MENU ▲/▼ buttons to display a desired menu.

- If you hold down the ▼ button, the next menu is displayed.
- If the selected function is on the first line, pressing the ▲ button displays the preceding menu.

3 Repeatedly press the MENU ▲/▼ buttons to select a desired function.

4 Press the MENU -/+ buttons to change function settings.

Example:

Changes the AUTO SHUTOFF setting.

MENU	2
☞ AUTO SHUTOFF	OFF
CHILD LOCK	OFF
BLUE BACK	ON
SELECT BY ▼▲ EXIT BY [DISPLAY]	
OPERATE BY -+ [DISPLAY]	

⇔

MENU	2
☞ AUTO SHUTOFF	ON
CHILD LOCK	OFF
BLUE BACK	ON
SELECT BY ▼▲ EXIT BY [DISPLAY]	
OPERATE BY -+ [DISPLAY]	

- With some functions, the operation method may differ.

Basic operation

1 Press the MENU ▲/▼ buttons.

One of the 4 menus is displayed.

MENU number

☞ INPUT	MENU	1
ON TIMER		TV
VNR	PR 1	0:00
		OFF
SELECT BY ▼▲ EXIT BY [DISPLAY]		
OPERATE BY -+ [DISPLAY]		

The icon ☞ on the left indicates the currently selected function.

5 Press the DISPLAY button to turn the display off.

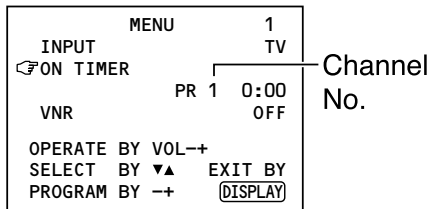
- To operate a menu using the buttons on the front panel of the TV, refer to "Operating menus" on page 17.

Using the TV's menus

ON TIMER

Your TV will automatically turn on and tune into the channel you set after the period of time you set.

- 1 Press **MENU ▲/▼** to display the "MENU 1" menu, then select "ON TIMER".



- 2 Press **MENU -/+** to select a channel you want to view when the TV turns on.
- 3 Press **VOLUME -/+** to select the period of time after which you want to turn on the TV.

The ON TIMER function starts.

- Each time you press the button, the period of time changes in 15 minute intervals (up to 12 hours).

To cancel the ON TIMER function, press the VOLUME -/+ button to set the period of time to "0:00".

- 4 Press **DISPLAY** to turn the display off.

- If you turn off the TV's main power by pressing the Main power button, the ON TIMER function is canceled.
- If you do not turn off the TV after starting the ON TIMER function, the channel will automatically switch to the channel set for the ON TIMER function.

When the time set for the ON TIMER function is reached:

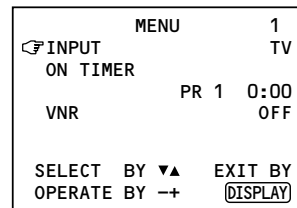
The TV automatically turns on and the channel set for the ON TIMER function is displayed.

- For safety reasons the TV will automatically turn off if no operations are made within approximately two hours after the TV is turned on with the ON TIMER function.
- The OFF TIMER function and AUTO SHUTOFF function have priority over the ON TIMER function.

INPUT

You can view images from VCRs or other devices connected to your TV.

- 1 Press **MENU ▲/▼** to display the "MENU 1" menu, then select "INPUT".



- 2 Press **MENU -/+** to select the VIDEO mode.

While you press MENU -/+ , it will switch to TV mode and VIDEO mode alternately.

Using the TV's menus

VNR (Video Noise Reduction)

You can reduce the picture noise.

- 1 Press MENU ▲/▼ to display the "MENU 1" menu, then select "VNR".

MENU	1
INPUT	TV
ON TIMER	
PR 1	0:00
VNR	ON
SELECT BY ▼▲	EXIT BY
OPERATE BY →+	DISPLAY

- 2 Press MENU -/+ to select "ON".

To cancel the VNR function, select "OFF".

AUTO SHUTOFF

You can set your TV to turn off if no signals are received for about 15 minutes or longer after the end of a broadcast.

- 1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "AUTO SHUTOFF".

MENU	2
AUTO SHUTOFF	ON
CHILD LOCK	ON
BLUE BACK	ON
SELECT BY ▼▲	EXIT BY
OPERATE BY →+	DISPLAY

- 2 Press MENU -/+ to select "ON".

To cancel the AUTO SHUTOFF function, select "OFF".

- The AUTO SHUTOFF function does not turn off the TV's main power.
- The AUTO SHUTOFF will not work for a VIDEO mode.

CHILD LOCK

You can disable the front control buttons of the TV.

When this function is set to "ON", the TV can be operated using only the remote control.

Use this function to prevent children from operating the TV without parental consent.

- 1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "CHILD LOCK".

MENU	2
AUTO SHUTOFF	ON
CHILD LOCK	ON
BLUE BACK	ON
SELECT BY ▼▲	EXIT BY
OPERATE BY →+	DISPLAY

- 2 Press MENU -/+ to select "ON".

To cancel the CHILD LOCK function, select "OFF".

- The CHILD LOCK function is canceled when you turn the power off.

BLUE BACK

You can mute the sound and change the picture into a blue screen while no signals are received by the TV, or when the signals are unstable.

- 1 Press MENU ▲/▼ to display the "MENU 2" menu, then select "BLUE BACK".

MENU	2
AUTO SHUTOFF	ON
CHILD LOCK	ON
BLUE BACK	ON
SELECT BY ▼▲	EXIT BY
OPERATE BY →+	DISPLAY

- 2 Press MENU -/+ to select "ON".

To cancel the BLUE BACK function, select "OFF".

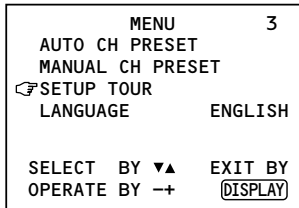
- To view a broadcast even when the reception signal is poor, set the BLUE BACK function to "OFF".
- Even when the BLUE BACK function is set to "OFF", the sound may not be audible.

Using the TV's menus

SETUP TOUR

You can start the SETUP TOUR function.

- 1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "SETUP TOUR".



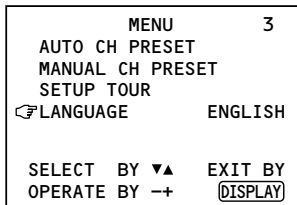
- 2 Press MENU -/+.

JVC logo is appear and the SETUP TOUR function will start.
For details, see page 6.

LANGUAGE

You can select the language for the on-screen display.

- 1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "LANGUAGE".



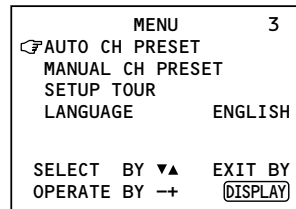
- 2 Press MENU -/+ to select language.

The on-screen display indications are in the selected language.

AUTO CH PRESET

You can automatically preset all TV channels that can be received by your TV to channels.

- 1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "AUTO CH PRESET".



- 2 Press MENU -/+ to start the AUTO CH PRESET function.

">>> ON SEARCH" is displayed on the screen.

When all the TV channels that can be received on your TV have been preset, the display goes out and the AUTO CH PRESET function operation is completed.

To stop the AUTO CH PRESET:
Press the MENU -/+ buttons.

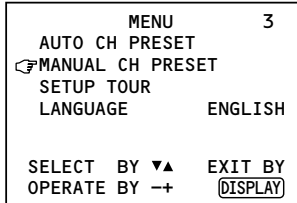
- The AUTO CH PRESET function does not preset a TV channel to the AV channel (channel number 0).
- If the TV cannot preset the TV channel you want to view, preset it manually. For details, see "MANUAL CH PRESET" on page 14.

Using the TV's menus

MANUAL CH PRESET

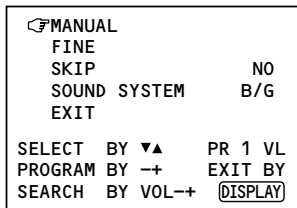
You can manually preset desired TV channels to desired channels.

- 1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "MANUAL CH PRESET".



- 2 Press MENU –/+.

The sub-menu is displayed.



- The channel number is displayed as a PR number. For example, channel 1 will be displayed as PR 1. However, the AV channel will be displayed as AV.

- 3 Press MENU –/+ to select the channel number.
- 4 Press VOLUME –/+ to start searching for the TV channel.

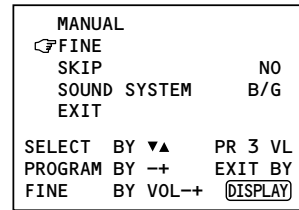
">>>" or "<<<" is displayed on the screen.

When the TV finds a TV channel, the ">>>" or "<<<" display goes out, and the TV channel is preset to the currently selected channel number.

- If the TV channel you want to preset is not displayed, repeat step 4 until the TV finds the TV channel you want to preset.
- To stop the MANUAL CH PRESET function, press any button other than the VOLUME –/+ button.

If the picture is not clear:
Fine-tune the TV channel.

- 1 Press MENU ▲/▼ to select "FINE".

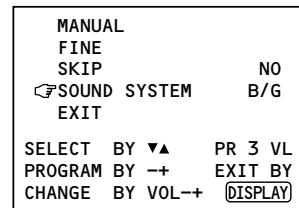


- 2 Hold VOLUME –/+ down to fine-tune the TV channel so that the best image is displayed on screen.

">" or "<" indicates that the TV is fine-tuning the TV channel.

If the sound is not clear:

- 1 Press MENU ▲/▼ to select "SOUND SYSTEM".



- 2 Press VOLUME –/+ to select the appropriate sound system.
- 5 Press MENU ▲/▼ to select "MANUAL".
- 6 Repeat steps 3 to 5 if you want to preset another TV channel to a channel.

Using the TV's menus

SKIP

You can set undesired channels to be skipped. Channels set to be skipped cannot be selected by the CHANNEL -/+ buttons nor the CHANNEL SCAN button.

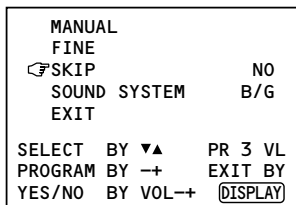
- Channels to which TV channels have not been preset are automatically set to be skipped.

1 Press MENU ▲/▼ to display the "MENU 3" menu, then select "MANUAL CH PRESET".

2 Press MENU -/+.

The sub-menu is displayed.

3 Press MENU ▲/▼ to select "SKIP".



4 Press MENU -/+ to select the channel you want to skip.

5 Press VOLUME -/+ to select "YES".

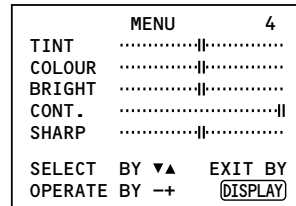
The channel is set to be skipped.
To cancel the SKIP function, select "NO".

6 Repeat steps 4 and 5 if you want to set another channel to skip.

Picture Adjustments

You can adjust the picture as you like.

1 Press MENU ▲/▼ to display the "MENU 4" menu.



2 Press MENU ▲/▼ to select an item and press MENU -/+ to adjust it.

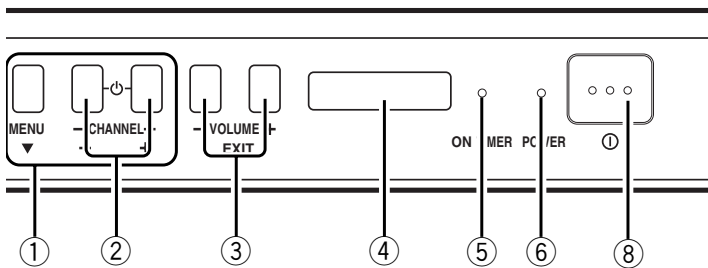
TINT*	- : Reddish	+ : Greenish
COLOUR	- : Lighter	+ : Deeper
BRIGHT	- : Darker	+ : Brighter
CONT.	- : Lower	+ : Higher
SHARP	- : Softer	+ : Sharper

* TINT (tint) is displayed only when viewing images from NTSC3.58 or NTSC4.43 colour systems.

Using the buttons on the TV

The following illustrations are of only some models are shown for explanation purpose only. You TV may not be exactly the same as illustrated.

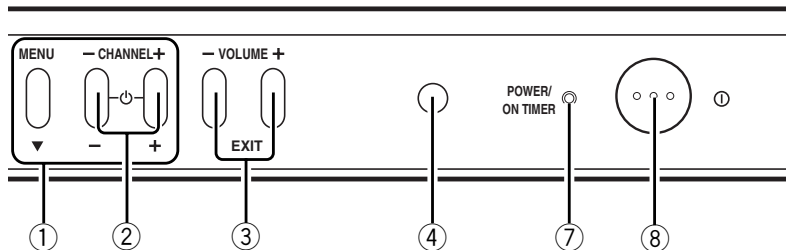
<AV-14F116>



- ① MENU button
 - MENU ▼ button
- ② CHANNEL +/- buttons
 - MENU +/- buttons
- ③ VOLUME +/- buttons
 - EXIT from MENU buttons
- ④ Remote control sensor
- ⑤ ON TIMER lamp

The light is switched on while ON TIMER function is operating.

<AV-21C116>



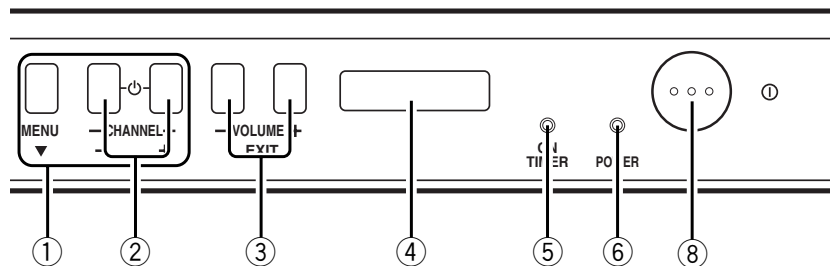
- ⑥ POWER lamp

When the Main power is on, the light is red.
- ⑦ POWER/ON TIMER lamp

When the Main power is on, the light is green.

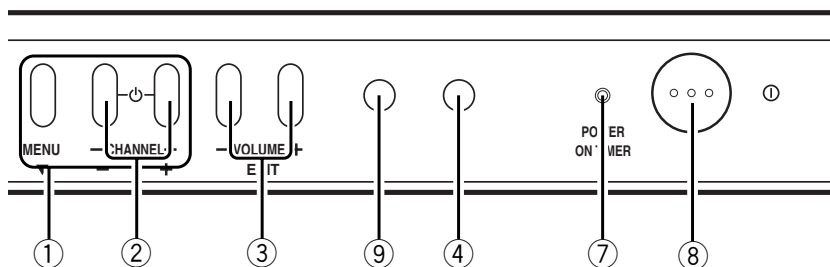
When ON TIMER function is on, it is red.

<AV-21D116>

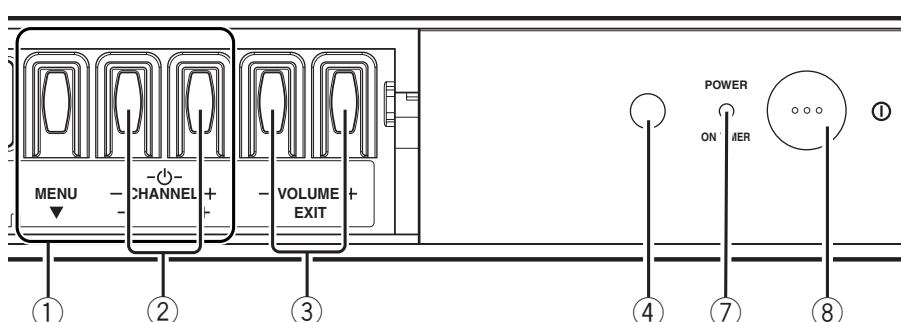


- ⑧ Main power button
- ⑨ Not application

<AV-21V116>



<AV-21B116>



Using the buttons on the TV

Basic operation

- Check to make sure the CHILD LOCK function is set to “OFF”. When the CHILD LOCK function is set to “ON”, the TV cannot be operated using the front control buttons. For details, see “CHILD LOCK” on page 12.

- 1 Press CHANNEL -/+ to turn the TV on from standby mode.
- 2 Press CHANNEL -/+ to select a channel.
- 3 Press VOLUME -/+ to adjust the volume.
- 4 To turn your TV off, press the Main power button to turn off the TV's main power.

To change the TV mode to the VIDEO mode:

- Select the VIDEO mode with the INPUT function in “MENU 1”.

Operating menus

You can operate functions in menus using the front control buttons on the TV.

- 1 Press MENU ▼ to display a menu.
- 2 Press MENU ▼ repeatedly to display the menu you want to use.
- 3 Press MENU ▼ to select the desired function or item.
- 4 Press MENU -/+ or VOLUME -/+ to carry out the desired operation.
For details, see the description for each function.
- 5 Press VOLUME -/+ to turn the menu display off.

To turn the sub-menu display off:

- 1 Press MENU ▼ to select “EXIT”.

MANUAL	
FINE	
SKIP	NO
SOUND SYSTEM	B/G
EXIT	
SELECT BY ▼▲	PR 3 VL
PROGRAM BY →	EXIT BY
EXIT BY VOL→	DISPLAY

- 2 Press VOLUME -/+ to turn the display off.

Troubleshooting

If there is no picture or the TV does not operate normally, make sure the problem isn't due to the reasons indicated below.

If the problem persists even after taking the measures indicated, please contact a service technician.

Cannot turn the TV on

- Press the Main power button on the TV.
- Connect the power cord to the AC outlet.

The screen turns blue

- Is the BLUE BACK function on? (see page 12.)

Remote control inoperable

- Replace the batteries. (see page 3.)

Buttons on front of the TV do not work

- Switch the CHILD LOCK function off. (see page 12.)

TV does not respond immediately

- Press the main power button on the TV to turn off the main power. Press the main power button again to turn on the TV. If the TV returns to a normal state, operation is normal.

The TV turns off suddenly

- Is the OFF TIMER function set to operate? (see page 9.)
- Is the AUTO SHUTOFF function on? (see page 12.)
- Have you not performed an operation for about two hours after the TV was switched on by the ON TIMER function? (see page 11.) If you don't perform an operation within about two hours, the TV is automatically switched off for safety.

Poor sound

- Press the SOUND SYSTEM button to select another sound system. (see page 8.)

Poor picture

- Press the COLOUR SYSTEM button to select another colour system. (see page 8.)
- Adjust the picture settings. (see page 15.)
- Set the Picture mode to STANDARD. (see page 8.)
- If noise (snow) totally blocks out the picture, check the following.
 - Have the TV and aerial been connected properly?
 - Has the aerial cable been damaged?
 - Is the aerial pointing in the right direction?
 - Is the aerial itself faulty?
- If the TV or aerial suffer interference from other equipment, stripes or noise may appear in the picture. Move any equipment which can cause interference away from the TV.
- If the TV or aerial suffer interference from signals reflecting from mountains or buildings, double-pictures (ghosting) will occur. Change the aerial's direction or replace it with an aerial with better directionality.
- When a white and bright still image (such as a white dress) is displayed on the screen, the white part may look as if it is coloured. When the image disappears from the screen, the unnatural colours will also disappear.

The TV turns on suddenly

- Is the ON TIMER function set to operate? (see page 11.)

The TV channel changes suddenly

- Is the ON TIMER function set to operate? (see page 11.)

Specifications

MODEL		AV-14F116	AV-21B116	AV-21C116	AV-21D116	AV-21V116
TV RF systems		B/G , I , D/K				
Colour systems	RF MODE	PAL, SECAM				
	VIDEO MODE	PAL, SECAM, NTSC 3.58 MHz, NTSC 4.43 MHz				
Channel and frequencies		VHF low channel (VL) = 46.25 to 168.25 MHz VHF high channel (VH) = 175.25 to 463.25 MHz UHF channel (U) = 471.25 to 863.25 MHz * Receives cable channels in mid band (X to Z, S1 to S10), super band (S11 to S20) and hyper band (S21 to S41)				
Power input		AC 220 to 240 V, 50/60 Hz (operating AC 90 to 260 V, 50/60 Hz)				
Power consumption		MAX 68 W	MAX 100 W	MAX 100 W	MAX 90 W	MAX 100 W
		AVG 47 W	AVG 65 W	AVG 65 W	AVG 60 W	AVG 65 W
Screen size (measured diagonally)		Picture tube 368.4 mm Visible area 335.4 mm	Picture tube 546.9 mm Visible area 508 mm	Picture tube 546.9 mm Visible area 508 mm	Picture tube 546.9 mm Visible area 508 mm	Picture tube 546.9 mm Visible area 508 mm
Audio output (Rated power output)		3W	3W	3W	3W	3W
Speakers		(5 x 9) cm x 2	(5 x 9) cm x 2	(5 x 9) cm x 1	(5 x 12) cm x 2	(6.5 x 13) cm x 2
External input / output		INPUT : VIDEO input (RCA), AUDIO input (RCA) OUTPUT : VIDEO output (RCA), AUDIO output (RCA) Headphone jack : stereo mini jack (3.5 mm diameter, sound is monaural)				
Dimension (W x H x D) (mm)		462 x 340.5 x 375 mm	598 x 476 x 476.7 mm	502 x 476.5 x 471.6 mm	598 x 468 x 478 mm	649 x 465.5 x 473.5 mm
Weight		10 kg	21 kg	22 kg	21 kg	22 kg
Accessories		- Remote control unit : RM-C1121 x 1 - AA/R6/UW-3 dry cell battery x 2 - Matching aerial adapter x 1 - Rod aerial x 1	- Remote control unit : RM-C1121 x 1 - AA/R6/UW-3 dry cell battery x 2 - Matching aerial adapter x 1	- Remote control unit : RM-C1121 x 1 - AA/R6/UW-3 dry cell battery x 2 - Matching aerial adapter x 1	- Remote control unit : RM-C1121 x 1 - AA/R6/UW-3 dry cell battery x 2 - Matching aerial adapter x 1	- Remote control unit : RM-C1121 x 1 - AA/R6/UW-3 dry cell battery x 2 - Matching aerial adapter x 1

Design and specifications subject to change without notice.



JVC

PARTS LIST

CAUTION

- The parts identified by the Δ symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied.
- P.W. BOARD Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
CR	Carbon Resistor	C CAP.	Ceramic Capacitor
FR	Fusible Resistor	E CAP.	Electrolytic Capacitor
PR	Plate Resistor	M CAP.	Mylar Capacitor
VR	Variable Resistor	CH CAP.	Chip Capacitor
HV R	High Voltage Resistor	HV CAP.	High Voltage Capacitor
MF R	Metal Film Resistor	MF CAP.	Metalized Film Capacitor
MG R	Metal Glazed Resistor	MM CAP.	Metalized Mylar Capacitor
MP R	Metal Plate Resistor	MP CAP.	Metalized Polystyrol Capacitor
OM R	Metal Oxide Film Resistor	PP CAP.	Polypropylene Capacitor
CMF R	Coating Metal Film Resistor	PS CAP.	Polystyrol Capacitor
UNF R	Non-Flammable Resistor	TF CAP.	Thin Film Capacitor
CH V R	Chip Variable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH MG R	Chip Metal Glazed Resistor	TAN. CAP.	Tantalum Capacitor
COMP. R	Composition Resistor	CH C CAP.	Chip Ceramic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
		CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

RESISTORS									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

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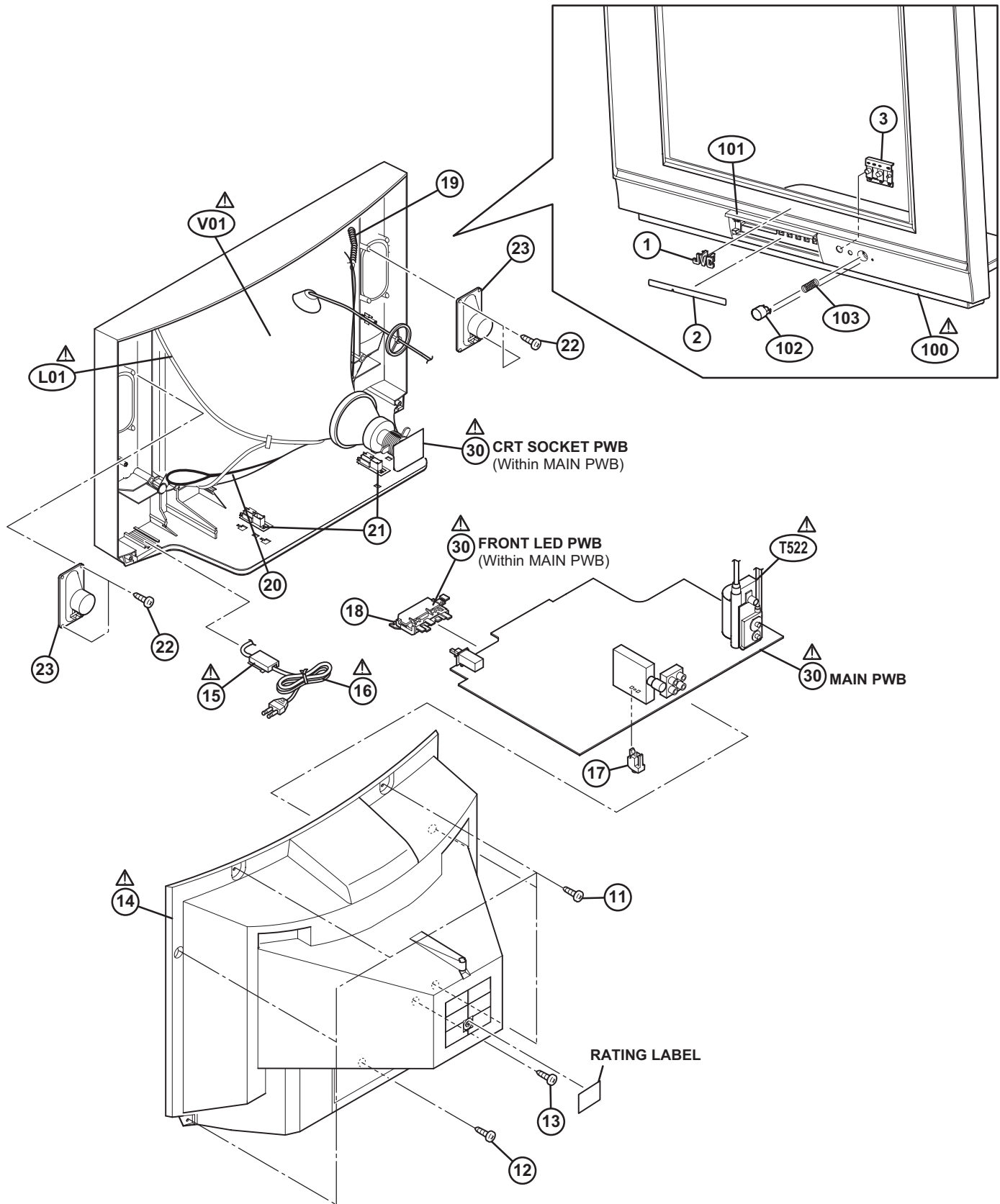
USING P.W. BOARD & REMOTE CONTROL UNIT

P.W.B ASS'Y	AV-21B116/B	AV-V2160/B
MAIN P.W.B	SCG-1550A-BK	SCG-1557A-BK
REMOTE CONTROL UNIT	RM-C1121-1H	←

EXPLODED VIEW PARTS LIST -1 [AV-21B116/B]

△	Ref.No.	Part No.	Part Name	Description	Local
△	V01	A51MBA11X05AN05	PICTURE TUBE(ITC)	Inc.DEF YOKE, PC MAGNET	
△	L01	QQW0125-001	DEG COIL		
△	T522	QQH0170-001	FB TRANSF		
	1	GG30152-002B-H	JVC MARK		
	2	GG30150-002A-H	OPERATION SHEET		
	3	GG30149-001A-H	LED LENS		
	11	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x6)	
	12	QYSBSF3010ZA	TAP SCREW	M3 x 10mm	
	13	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm	
△	14	GG10421-002B-H	REAR COVER		
△	15	CM47005-A01-H	POWER CORD CLAMP		
△	16	QMPR420-165-K2	POWER CORD	1.65m BLACK	
	17	GG40055-001A-H	PB STOPPER		
	18	GG30119-001B-H	SUB PCB HOLDER		
	19	A48457-3-H	SPRING		
	20	WJY0008-006A-E	BRAIDED ASS'Y		
	21	GG30151-001A-H	CHASSIS RAIL	(x2)	
	22	QYSBSF4012ZA	TAP SCREW	M4 x 12mm(x4)	
	23	QAS0347-001	SPEAKER	(x2) SP01,SP02	
△	30	SCG-1550A-BK	MAIN PWB		
△	100	GG10419-003A-H	FRONT CABINET ASS'Y	Inc.101,102,103	
	101	GG20131-002A-H	DOOR		
	102	GG30148-002A-H	POWER KNOB		
	103	CM35235-003-H	SPRING		

EXPLODED VIEW -1 [AV-21B116/B]



EXPLODED VIEW PARTS LIST -2 [AV-V2160/B]

△	Ref.No.	Part No.	Part Name	Description	Local
△	V01	A51MBA11X05AN05	PICTURE TUBE(ITC)	Inc.DEF YOKE, PC MAGNET	
△	L01	QQW0125-001	DEG COIL		
△	T522	QQH0170-001	FB TRANSF		
	1	GG30068-003A-H	AV SHEET		
	2	GG40023-002A-H	JVC MARK		
	3	GG30044-001B-H	REMOCON LENS		
	4	GG30042-001B-H	LED LENS		
	11	QYSBSBG4016ZA	TAP SCREW	M4 x 16mm(x2)	
	12	QYSBSFG4016ZA	TAP SCREW	M4 x 16mm(x7)	
	13	QYSBSF3010ZA	TAP SCREW	M3 x 10mm	
△	14	GG10187-018A-H	REAR COVER		
	15	CM48144-004-H	PB STOPPER		
△	16	CM47005-A01-H	POWER CORD CLAMP		
△	17	QMPR420-165-K2	POWER CORD	1.65m BLACK	
	18	A48457-3-H	SPRING		
	19	WJY0008-006A-E	BRAIDED ASS'Y		
	20	CM36623-003-H	CHASSIS RAIL	(x2)	
	21	GG40046-001A-H	TAP SCREW	(x4)	
	22	LC40226-005A-H	SPACER	(x4)	
	23	GG20057-002A-H	SPEAKER HOLDER	(x4)	
	24	QAS0152-001	SPEAKER	(x2) SP01,SP02	
△	30	SCG-1557A-BK	MAIN PWB		
△	100	GG10238-024A-H	FRONT CABINET ASS'Y	Inc.101,102,103,104	
	101	GG20044-008A-H	DOOR		
	102	GG30043-004A-H	POWER KNOB		
	103	CM35235-003-H	SPRING		
	104	GG20022-008A-H	CONTROL KNOB		

This exploded view diagram illustrates the assembly of a CRT monitor. The components are numbered as follows:

- 100**: Monitor bezel/frame.
- 101**: Bezel reinforcement plate.
- 102**: Bezel reinforcement screw.
- 103**: Bezel reinforcement bracket.
- 104**: Bezel reinforcement bracket screw.
- 2**: Bezel reinforcement bracket screw.
- 3**: Bezel reinforcement bracket screw.
- 4**: Bezel reinforcement bracket screw.
- 1**: Bezel reinforcement plate screw.
- 21**: Bezel reinforcement screw.
- 22**: Bezel reinforcement screw.
- 23**: Bezel reinforcement screw.
- 24**: Bezel reinforcement screw.
- 18**: Bezel reinforcement screw.
- 19**: Bezel reinforcement screw.
- 20**: Bezel reinforcement screw.
- 25**: Bezel reinforcement screw.
- 26**: Bezel reinforcement screw.
- 27**: Bezel reinforcement screw.
- 28**: Bezel reinforcement screw.
- 29**: Bezel reinforcement screw.
- 30**: CRT SOCKET PWB (Within MAIN PWB).
- 31**: MAIN PWB.
- 32**: MAIN PWB screw.
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- 237**: MAIN PWB screw.
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PRINTED WIRING BOARD PARTS LIST [AV-21B116/B]

MAIN P.W. BOARD ASS'Y (SCG-1550A-BK)

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
IC301	NN5198K	IC	(SERVICE)	C004	QETN1CM-477Z	E CAPACITOR	470uF 16V M
IC421	LA78040N	IC		C005	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J
IC651	AN5265	IC		C008	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M
IC701	MN1873287JM	IC		C010	NDC31HJ-680X	C CAPACITOR	68pF 50V J
IC702	ATE08-21YMG6	IC		C011	NDC31HJ-680X	C CAPACITOR	68pF 50V J
IC703	L78LR05E-MA	IC		C103	QETN1EM-476Z	E CAPACITOR	47uF 25V M
IC704	GP1UE281QKVF	IR DETECT UNIT		C104	NCB31HK-472X	C CAPACITOR	4700pF 50V K
IC921	STR-W5753A/F5	IC		C105	NCB31HK-472X	C CAPACITOR	4700pF 50V K
IC971	L7809CP	IC		C106	NCB31HK-472X	C CAPACITOR	4700pF 50V K
IC972	L7805CP	IC		C107	NCB31HK-472X	C CAPACITOR	4700pF 50V K
Q102	2SC5397/CD/-T	TRANSISTOR		C110	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
Q161	2SC3928A/QR/-X	TRANSISTOR		C112	QETN1EM-476Z	E CAPACITOR	47uF 25V M
Q301	2SA1530A/QR/-X	TRANSISTOR		C113	NCB31HK-472X	C CAPACITOR	4700pF 50V K
Q302	2SC3928A/QR/-X	TRANSISTOR		C115	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q351	2SC4212/Z1/	TRANSISTOR		C116	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q352	2SC4212/Z1/	TRANSISTOR		C117	QFVF1HJ-224Z	MF CAPACITOR	0.22uF 50V J
Q353	2SC4212/Z1/	TRANSISTOR		C119	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
Q401	DTIC124ESA-T	DIGI TRANSISTOR		C120	NDC31HJ-121X	C CAPACITOR	120pF 50V J
Q402	2SC3928A/QR/-X	TRANSISTOR		C121	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q521	2SC2655/Y/-T	TRANSISTOR		C122	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
△Q522	2SD2627-YB11	POW TRANSISTOR		C161	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q571	2SA1208/ST/Z1-T	TRANSISTOR		C162	NCB31HK-152X	C CAPACITOR	1500pF 50V K
Q572	2SC3928A/QR/-X	TRANSISTOR		C164	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q651	2SC3928A/QR/-X	TRANSISTOR		C165	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q652	2SC3928A/QR/-X	TRANSISTOR		C166	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
Q653	2SA1530A/QR/-X	TRANSISTOR		C301	NCB31HK-123X	C CAPACITOR	0.012uF 50V K
Q702	2SC3928A/QR/-X	TRANSISTOR		C302	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M
Q703	2SC3928A/QR/-X	TRANSISTOR		C303	NDC31HJ-100X	C CAPACITOR	10pF 50V J
Q708	UN2212-X	DIGI TRANSISTOR		C304	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J
Q710	UN2212-X	DIGI TRANSISTOR		C305	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
Q803	KTC3199/YG/-T	TRANSISTOR		C306	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
Q804	2SC3928A/QR/-X	TRANSISTOR		C307	QETN1CM-477Z	E CAPACITOR	470uF 16V M
Q974	2SA966/OY/-T	TRANSISTOR		C308	QETN1CM-107Z	E CAPACITOR	100uF 16V M
Q975	UN2212-X	DIGI TRANSISTOR		C309	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
D001	MTZJ33A-T2	Z DIODE		C310	NDC31HJ-221X	C CAPACITOR	220pF 50V J
D301	MTZJ9.1B-T2	Z DIODE		C311	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
D302	MTZJ9.1B-T2	Z DIODE		C312	QENC1HM-474Z	BP E CAPACITOR	0.47uF 50V M
D303	MA3091/M/-X	Z DIODE		C313	QETN1HM-335Z	E CAPACITOR	3.3uF 50V M
D305	1K4-T2	SB DIODE		C314	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
D306	QRE121J-561Y	C RESISTOR	560Ω 1/2W J	C315	QETN1CM-107Z	E CAPACITOR	100uF 16V M
D341	MA111-X	SI DIODE		C316	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D421	MTZJ75-T2	Z DIODE		C317	NCB31EK-473X	C CAPACITOR	0.047uF 25V K
D423	1SR124-400A-T2	SI DIODE		C321	NDC31HJ-120X	C CAPACITOR	12pF 50V J
D425	MA111-X	SI DIODE		C322	NCB31EK-273X	C CAPACITOR	0.027uF 25V K
D427	MTZJ27B-T2	Z DIODE		C323	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
D501	MTZJ6.8C-T2	Z DIODE		C324	QETN1HM-336Z	E CAPACITOR	33uF 50V M
D551	FR105GT-T3	SI DIODE		C325	QENC1HM-106Z	BP E CAPACITOR	10uF 50V M
D552	FR105GT-T3	SI DIODE		C326	NCS21HJ-221X	C CAPACITOR	220pF 50V J
D553	MTZJ9.1B-T2	Z DIODE		C341	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D554	MA111-X	SI DIODE		C351	QCZ0340-33Z	C CAPACITOR	3300pF 2kV K
D571	MTZJ7.5S-T2	Z DIODE		C354	NDC31HJ-331X	C CAPACITOR	330pF 50V J
D581	MTZJ20B-T2	Z DIODE		C355	NDC31HJ-271X	C CAPACITOR	270pF 50V J
D582	FR105GT-T3	SI DIODE		C356	NDC31HJ-391X	C CAPACITOR	390pF 50V J
D651	MA111-X	SI DIODE		C357	QETN1AM-477Z	E CAPACITOR	470uF 10V M
D652	MTZJ12C-T2	Z DIODE		C365	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
D653	MA111-X	SI DIODE		C366	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
D654	MTZJ12C-T2	Z DIODE		C367	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
D655	MA111-X	SI DIODE		C401	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J
D656	MA111-X	SI DIODE		C423	QCS32HJ-180Z	C CAPACITOR	18pF 500V J
D657	MA111-X	SI DIODE		C424	QFLC2AJ-103Z	M CAPACITOR	0.01uF 100V J
D704	SPR-39MVWF	LED	POWER,ON TIMER(RED-GREEN)	C426	QFLC1HJ-102Z	M CAPACITOR	1000pF 50V J
D707	MA111-X	SI DIODE		C427	QETN1VM-107Z	E CAPACITOR	100uF 35V M
D731	MA111-X	SI DIODE		C428	QETN1VM-107Z	E CAPACITOR	100uF 35V M
D901	G2SBA60	BRIDGE DIODE		C429	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D920	1SS133-T2	SI DIODE		C430	QFN32AJ-472Z	M CAPACITOR	4700pF 100V J
D921	FR105GT-T3	SI DIODE		C433	QEHR1HM-475Z	E CAPACITOR	4.7uF 50V M
D925	FR105GT-T3	SI DIODE		C435	QETM1EM-228	E CAPACITOR	2200uF 25V M
D927	MTZJ36A-T2	Z DIODE		C436	QFVF1HJ-334Z	MF CAPACITOR	0.33uF 50V J
D928	MTZJ3.3A-T2	Z DIODE		C437	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
D930	FR107GT-T3	SI DIODE		C501	QETN1EM-476Z	E CAPACITOR	47uF 25V M
D931	MA111-X	SI DIODE		C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
D933	MTZJ16C-T2	Z DIODE		C503	QETN1HM-106Z	E CAPACITOR	10uF 50V M
D941	RU3AM-LFC4	SI DIODE		C523	QETN1EM-476Z	E CAPACITOR	47uF 25V M
D942	ERC30-Q2L38E	SI DIODE		C525	QFZ0200-96Z	MPP CAPACITOR	9600pF 1.5kV H
D943	FR105GT-T3	SI DIODE		C526	QFLC1HJ-822Z	M CAPACITOR	8200pF 50V J
D982	MA111-X	SI DIODE		C527	QFZ0197-274	MPP CAPACITOR	0.27uF 250V J
D983	MA111-X	SI DIODE		C529	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J
C001	QETN1HM-106Z	E CAPACITOR	10uF 50V M	C530	QCB32HK-561Z	C CAPACITOR	560pF 500V K
C002	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	C531	QEZO203-107	E CAPACITOR	100uF 160V M
				C552	QETM1VM-108	E CAPACITOR	1000uF 35V M
				C554	QETN2EM-475Z	E CAPACITOR	4.7uF 250V M
				C555	QFLC2AJ-104Z	M CAPACITOR	0.1uF 100V J
				C571	QETN1AM-107Z	E CAPACITOR	100uF 10V M
				C572	QETN1EM-476Z	E CAPACITOR	47uF 25V M

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
C581	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J	R301	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C652	NCB31HK-473X	C CAPACITOR	0.047uF 50V K	R302	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
C653	QETN1HM-106Z	E CAPACITOR	100uF 50V M	R303	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C654	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R304	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C655	QETN1HM-106Z	E CAPACITOR	100uF 50V M	R305	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C656	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M	R306	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C657	QETN1EM-107Z	E CAPACITOR	100uF 25V M	R307	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J
C658	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R308	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C659	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	R312	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C663	NCB31HK-102X	C CAPACITOR	1000pF 50V K	R313	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C664	QETN1CM-107Z	E CAPACITOR	100uF 16V M	R314	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C665	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R321	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J
C705	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R322	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J
C706	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	R323	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C707	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R324	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C708	QETN1AM-108Z	E CAPACITOR	1000uF 10V M	R326	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C709	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R327	NRSA63J-475X	MG RESISTOR	4.7MΩ 1/16W J
C710	QETN1CM-107Z	E CAPACITOR	100uF 16V M	R341	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C711	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R347	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J
C712	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R349	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
C713	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R351	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C716	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R352	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C717	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R353	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C718	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R354	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C719	QETN1HM-105Z	E CAPACITOR	1uF 50V M	R355	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C720	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R356	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C721	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	R357	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C722	NDC31HJ-101X	C CAPACITOR	100pF 50V J	R358	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C724	NDC31HJ-560X	C CAPACITOR	56pF 50V J	R359	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C727	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	R360	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C728	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R361	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C729	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R362	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C730	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R363	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C744	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R364	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C805	QETN1CM-227Z	E CAPACITOR	220uF 16V M	R365	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C806	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R366	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C811	QETN1HM-106Z	E CAPACITOR	10uF 50V M	R367	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C841	NCB31HK-152X	C CAPACITOR	1500pF 50V K	R368	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
△C901	QFZ9073-224	MM CAPACITOR	0.22uF AC250V M	R374	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J
△C904	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R401	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J
△C905	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R421	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
△C907	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R423	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C909	QEZO476-127	E CAPACITOR	120uF	R424	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
△C910	QFZ9072-104	MM CAPACITOR	0.1uF AC250V K	R425	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C922	QFLC1HJ-104Z	M CAPACITOR	0.1uF 50V J	R426	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C924	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	R429	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C925	QETN1HM-336Z	E CAPACITOR	33uF 50V M	R430	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J
C926	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	R431	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J
C927	QFLC1HJ-104Z	M CAPACITOR	0.1uF 50V J	R432	QRE121J-3R9Y	C RESISTOR	3.9Ω 1/2W J
C929	QFKA2JK-103	MM CAPACITOR	0.01uF 630V K	R433	QRE121J-2R7Y	C RESISTOR	2.7Ω 1/2W J
C931	QCZ0364-681	C CAPACITOR	680pF 2kV K	R436	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J
C932	NDC31HJ-221X	C CAPACITOR	220pF 50V J	R440	QRE121J-471Y	C RESISTOR	470Ω 1/2W J
C941	QCZ0364-561	C CAPACITOR	560pF 2kV K	R441	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
C942	QEZO203-107	E CAPACITOR	100uF 160V M	R442	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C944	QCB32HK-222Z	C CAPACITOR	2200pF 500V K	R443	QRE121J-1R0Y	C RESISTOR	1Ω 1/2W J
C945	QEHR1EM-108Z	E CAPACITOR	1000uF 25V M	R453	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C946	QETN1EM-108Z	E CAPACITOR	1000uF 25V M	R502	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C947	QCB32HK-222Z	C CAPACITOR	2200pF 500V K	R503	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J
C948	QETN1EM-108Z	E CAPACITOR	1000uF 25V M	R521	QRE121J-560Y	C RESISTOR	56Ω 1/2W J
C949	NDC31HJ-471X	C CAPACITOR	470pF 50V J	R525	QRL029J-330	OMF RESISTOR	33Ω 2W J
C976	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R526	QRE121J-271Y	C RESISTOR	270Ω 1/2W J
C977	QETN1CM-227Z	E CAPACITOR	220uF 16V M	R528	QRE121J-471Y	C RESISTOR	470Ω 1/2W J
C978	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R529	QRL039J-681	OMF RESISTOR	680Ω 3W J
C979	QETN1AM-227Z	E CAPACITOR	220uF 10V M	R531	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
△C991	QCZ9071-102	C CAPACITOR	1000pF AC400V M	R532	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
△C992	QCZ9071-102	C CAPACITOR	1000pF AC400V M	△R551	QRX029J-R47	MF RESISTOR	0.47Ω 2W J
△C993	QCZ9071-102	C CAPACITOR	1000pF AC400V M	R552	QRJ146J-2R2X	UNF C RESISTOR	2.2Ω 1/4W J
				R554	QRE121J-152Y	C RESISTOR	1.5kΩ 1/2W J
R002	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R571	QRE121J-222Y	C RESISTOR	2.2kΩ 1/2W J
R003	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R573	QRT029J-1R5	MF RESISTOR	1.5Ω 2W J
R004	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	R574	QRT029J-1R5	MF RESISTOR	1.5Ω 2W J
R102	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	R576	QRE121J-223Y	C RESISTOR	22kΩ 1/2W J
R103	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	R577	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J
R109	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	R578	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R110	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	R581	QRE121J-182Y	C RESISTOR	1.8kΩ 1/2W J
R111	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	R582	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J
R112	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	R583	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J
R113	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R651	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
R120	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	R652	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R121	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R653	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
R159	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	R654	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R161	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	R655	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J
R162	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	R656	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R163	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R657	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J
R164	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R658	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J
R165	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J	R659	QRE121J-4R7Y	C RESISTOR	4.7Ω 1/2W J
R166	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	R660	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
R661	QRE121J-271Y	C RESISTOR	270Ω 1/2W J	CF162	QAX0694-001Z	C FILTER	5.742MHz
R662	QRE121J-271Y	C RESISTOR	270Ω 1/2W J	△CP981	ICP-N50-T	IC PROTECTOR	2.0A
R664	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	△CP982	ICP-N75-T	IC PROTECTOR	2.7A
R665	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	△F901	QMF51E2-3R15-S	FUSE	3.15A AC250V
R666	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	J002	QNN0384-001	PIN JACK	VIDEO AUDIO IN(OUT)(REAR)
R667	QRE121J-101Y	C RESISTOR	100Ω 1/2W J	J003	QNN0281-003	PIN JACK	VIDEO IN(FRONT)
R668	QRT029J-5R6	MF RESISTOR	5.6Ω 2W J	J004	QNN0281-002	PIN JACK	AUDIO IN(FRONT)
R706	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	J005	QNS0197-001	3.5 JACK	HEADPHONE
R707	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	K351	QQR0621-002Z	FERRITE BEADS	
R708	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	K421	QQR1113-001Z	FERRITE BEADS	
R709	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K901	QQR1113-001Z	FERRITE BEADS	
R710	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K902	QQR1113-001Z	FERRITE BEADS	
R711	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K941	QQR1113-001Z	FERRITE BEADS	
R712	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K942	QQR1113-001Z	FERRITE BEADS	
R713	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K943	QQR1113-001Z	FERRITE BEADS	
R714	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	△LF901	QQR0527-002	LINE FILTER	
R715	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	S701	QSW0619-003Z	PUSH SWITCH	CH+
R716	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	S702	QSW0619-003Z	PUSH SWITCH	CH-
R718	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	S703	QSW0619-003Z	PUSH SWITCH	VOL+
R719	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	S704	QSW0619-003Z	PUSH SWITCH	VOL-
R720	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	S705	QSW0619-003Z	PUSH SWITCH	MENU
R721	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	△S901	QSW0750-001	PUSH SWITCH	POWER
R723	QRL039J-270	OMF RESISTOR	27Ω 3W J	SF102	QAX0666-002	SAW FILTER	
R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	SF122	QAX0325-001	SAW FILTER	
R726	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	△SK351	QNZ0536-002	CRT SOCKET	
R727	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	△TH901	QAD0121-9R0	P THERMISTOR	9Ω
R728	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	TU001	QAU0466-001	TUNER	
R729	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	△VA901	QAF0072-621	VARIATOR	620V
R730	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	X301	QAX0705-001Z	CRYSTAL	4.433619MHz
R731	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	X302	QAX0860-001Z	CRYSTAL	3.579545MHz
R736	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	X701	QAX0884-001	C RESONATOR	12.000MHz
R737	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		GG30157-001A-H	LED HOLDER	
R738	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R739	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R740	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J				
R741	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J				
R742	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J				
R746	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R748	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J				
R749	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J				
R771	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J				
R772	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J				
R773	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J				
R796	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R797	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J				
R802	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J				
R806	QRE121J-271Y	C RESISTOR	270Ω 1/2W J				
R807	NRSA63J-680X	MG RESISTOR	68Ω 1/16W J				
R810	QRG01GJ-560	OMF RESISTOR	56Ω 1W J				
R811	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J				
R815	QRE121J-181Y	C RESISTOR	180Ω 1/2W J				
R816	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J				
R817	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J				
R901	QRF104K-3R9	UNF VWW RESISTOR	3.9Ω 10W K				
R903	QRL029J-104	OMF RESISTOR	100kΩ 2W J				
R904	QRL039J-151	OMF RESISTOR	150Ω 3W J				
R906	QRL029J-104	OMF RESISTOR	100kΩ 2W J				
R921	QRE121J-1R8Y	C RESISTOR	1.8Ω 1/2W J				
R922	QRE121J-221Y	C RESISTOR	220Ω 1/2W J				
R923	QRZ0237-R18	UNF VWW RESISTOR	0.18Ω 3W J				
R924	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J				
R925	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J				
R928	QRL039J-683	OMF RESISTOR	68kΩ 3W J				
R933	QRE121J-4R7Y	C RESISTOR	4.7Ω 1/2W J				
R934	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J				
R935	QRE121J-392Y	C RESISTOR	3.9kΩ 1/2W J				
R974	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J				
R976	QRL029J-120	OMF RESISTOR	12Ω 2W J				
R977	QRE121J-122Y	C RESISTOR	1.2kΩ 1/2W J				
R978	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J				
R979	QRL039J-470	OMF RESISTOR	47Ω 3W J				
R980	QRL029J-153	OMF RESISTOR	15kΩ 2W J				
△R991	QRZ9046-825Z	C RESISTOR	8.2MΩ 1/2W K				
L001	QQL244K-8R2Z	PEAKING COIL	8.2uH K				
L101	QQL244J-2R2Z	PEAKING COIL	2.2uH J				
L103	QQL244K-8R2Z	PEAKING COIL	8.2uH K				
L522	QQR1005-002	LINEARITY COIL					
L551	QQL2026-320	COIL	32uH ±7%				
L701	QQL244J-5R6Z	COIL	5.6uH J				
L941	QQL26AK-820Z	CHOKE COIL	82uH K				
L942	QQL244J-4R7Z	PEAKING COIL	4.7uH J				
L943	QQL244J-4R7Z	PEAKING COIL	4.7uH J				
T501	QQR1244-001	DRIVE TRANSF					
△T921	QQS0213-001	SW TRANSF					
CF161	QAX0694-001Z	C FILTER	5.742MHz				

PRINTED WIRING BOARD PARTS LIST [AV-V2160/B]

MAIN P.W. BOARD ASS'Y (SCG-1557A-BK)

△Ref No.	Part No.	Part Name	Description Local
IC301	NN5198K	IC	(SERVICE)
IC421	LA78040N	IC	
IC651	AN5265	IC	
IC701	MN1873287JM	IC	
IC702	ATE08-21YMG6	IC	
IC703	L78LR05E-MA	IC	
IC704	GP1UE281QKVF	IR DETECT UNIT	
IC921	STR-W5753A/F5	IC	
IC971	L7809CP	IC	
IC972	L7805CP	IC	
Q102	2SC5397/CD/-T	TRANSISTOR	
Q161	2SC3928A/QR/-X	TRANSISTOR	
Q301	2SA1530A/QR/-X	TRANSISTOR	
Q302	2SC3928A/QR/-X	TRANSISTOR	
Q351	2SC4212/Z1/	TRANSISTOR	
Q352	2SC4212/Z1/	TRANSISTOR	
Q353	2SC4212/Z1/	TRANSISTOR	
Q401	DTC124ESA-T	DIGI TRANSISTOR	
Q402	2SC3928A/QR/-X	TRANSISTOR	
Q521	2SC2655/Y/-T	TRANSISTOR	
△Q522	2SD2627-YB11	POW TRANSISTOR	
Q571	2SA1208/ST/Z1-T	TRANSISTOR	
Q572	2SC3928A/QR/-X	TRANSISTOR	
Q651	2SC3928A/QR/-X	TRANSISTOR	
Q652	2SC3928A/QR/-X	TRANSISTOR	
Q653	2SA1530A/QR/-X	TRANSISTOR	
Q702	2SC3928A/QR/-X	TRANSISTOR	
Q703	2SC3928A/QR/-X	TRANSISTOR	
Q708	UN2212-X	DIGI TRANSISTOR	
Q710	UN2212-X	DIGI TRANSISTOR	
Q803	KTC3199/YG/-T	TRANSISTOR	
Q804	2SC3928A/QR/-X	TRANSISTOR	
Q974	2SA966/OY/-T	TRANSISTOR	
Q975	UN2212-X	DIGI TRANSISTOR	
D001	MTZJ33A-T2	Z DIODE	
D301	MTZJ9.1B-T2	Z DIODE	
D302	MTZJ9.1B-T2	Z DIODE	
D303	MA3091/M/-X	Z DIODE	
D305	1K4-T2	SB DIODE	
D306	QRE121J-561Y	C RESISTOR	560Ω 1/2W J
D306	or QRE122J-561	C RESISTOR	560Ω 1/2W J
D306	or QRG01GJ-561	OMF RESISTOR	560Ω 1W J
D341	MA111-X	SI DIODE	
D421	MTZJ75-T2	Z DIODE	
D423	1SR124-400A-T2	SI DIODE	
D425	MA111-X	SI DIODE	
D427	MTZJ27B-T2	Z DIODE	
D501	MTZJ6.8C-T2	Z DIODE	
D551	FR105GT-T3	SI DIODE	
D552	FR105GT-T3	SI DIODE	
D553	MTZJ9.1B-T2	Z DIODE	
D554	MA111-X	SI DIODE	
D571	MTZJ7.5S-T2	Z DIODE	
D581	MTZJ20B-T2	Z DIODE	
D582	FR105GT-T3	SI DIODE	
D651	MA111-X	SI DIODE	
D652	MTZJ12C-T2	Z DIODE	
D653	MA111-X	SI DIODE	
D654	MTZJ12C-T2	Z DIODE	
D655	MA111-X	SI DIODE	
D656	MA111-X	SI DIODE	
D657	MA111-X	SI DIODE	
D704	SPR-39MVWF	LED	POWER,ON TIMER(RED-GREEN)
D707	MA111-X	SI DIODE	
D731	MA111-X	SI DIODE	
D901	G2SBA60	BRIDGE DIODE	
D920	1SS133-T2	SI DIODE	
D921	FR105GT-T3	SI DIODE	
D925	FR105GT-T3	SI DIODE	
D927	MTZJ36A-T2	Z DIODE	
D928	MTZJ3.3A-T2	Z DIODE	
D930	FR107GT-T3	SI DIODE	
D931	MA111-X	SI DIODE	
D933	MTZJ16C-T2	Z DIODE	
D941	RU3AM-LFC4	SI DIODE	
D942	ERC30-02L38E	SI DIODE	
D943	FR105GT-T3	SI DIODE	
D982	MA111-X	SI DIODE	
D983	MA111-X	SI DIODE	

△Ref No.	Part No.	Part Name	Description Local
C001	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C002	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C004	QETN1CM-477Z	E CAPACITOR	470uF 16V M
C005	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J
C008	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M
C010	NDC31HJ-680X	C CAPACITOR	68pF 50V J
C011	NDC31HJ-680X	C CAPACITOR	68pF 50V J
C103	QETN1EM-476Z	E CAPACITOR	47uF 25V M
C104	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C105	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C106	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C107	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C110	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C112	QETN1EM-476Z	E CAPACITOR	47uF 25V M
C113	NCB31HK-472X	C CAPACITOR	4700pF 50V K
C115	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C116	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C117	QFVF1HJ-224Z	MF CAPACITOR	0.22uF 50V J
C119	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
C120	NDC31HJ-121X	C CAPACITOR	120pF 50V J
C121	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C122	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C161	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C162	NCB31HK-152X	C CAPACITOR	1500pF 50V K
C164	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C165	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C166	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
C301	NCB31HK-123X	C CAPACITOR	0.012uF 50V K
C302	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M
C303	NDC31HJ-100X	C CAPACITOR	10pF 50V J
C304	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J
C305	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
C306	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C307	QETN1CM-477Z	E CAPACITOR	470uF 16V M
C308	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C309	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C310	NDC31HJ-221X	C CAPACITOR	220pF 50V J
C311	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C312	QENC1HM-474Z	BP E CAPACITOR	0.47uF 50V M
C313	QETN1HM-335Z	E CAPACITOR	3.3uF 50V M
C314	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C315	QETN1CM-107Z	E CAPACITOR	100uF 16V M
C316	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C317	NCB31EK-473X	C CAPACITOR	0.047uF 25V K
C321	NDC31HJ-120X	C CAPACITOR	12pF 50V J
C322	NCB31EK-273X	C CAPACITOR	0.027uF 25V K
C323	QETN1HM-474Z	E CAPACITOR	0.47uF 50V M
C324	QETN1HM-336Z	E CAPACITOR	33uF 50V M
C325	QENC1HM-106Z	BP E CAPACITOR	10uF 50V M
C326	NCS21HJ-221X	C CAPACITOR	220pF 50V J
C341	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C351	QCZ0340-332	C CAPACITOR	3300pF 2kV K
C354	NDC31HJ-331X	C CAPACITOR	330pF 50V J
C355	NDC31HJ-271X	C CAPACITOR	270pF 50V J
C356	NDC31HJ-391X	C CAPACITOR	390pF 50V J
C357	QETN1AM-477Z	E CAPACITOR	470uF 10V M
C365	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
C366	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
C367	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M
C401	QFVF1HJ-474Z	MF CAPACITOR	0.47uF 50V J
C423	QCS32HJ-180Z	C CAPACITOR	18pF 500V J
C424	QFLC2AJ-103Z	M CAPACITOR	0.01uF 100V J
C426	QFLC1HJ-102Z	M CAPACITOR	1000pF 50V J
C427	QETN1VM-107Z	E CAPACITOR	100uF 35V M
C428	QETN1VM-107Z	E CAPACITOR	100uF 35V M
C429	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C430	QFN32AJ-472Z	M CAPACITOR	4700pF 100V J
C433	QEH1HM-475Z	E CAPACITOR	4.7uF 50V M
C435	QETM1EM-228	E CAPACITOR	2200uF 25V M
C436	QFVF1HJ-334Z	MF CAPACITOR	0.33uF 50V J
C437	NCB31HK-104X	C CAPACITOR	0.1uF 50V K
C501	QETN1EM-476Z	E CAPACITOR	47uF 25V M
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K
C503	QETN1HM-106Z	E CAPACITOR	10uF 50V M
C523	QETN1EM-476Z	E CAPACITOR	47uF 25V M
C525	QFZ0200-962	MPP CAPACITOR	9600pF 1.5kV H
C526	QFLC1HJ-822Z	M CAPACITOR	8200pF 50V J
C527	QFZ0197-274	MPP CAPACITOR	0.27uF 250V J
C529	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J
C530	QCB32HK-561Z	C CAPACITOR	560pF 500V K
C531	QEZ0203-107	E CAPACITOR	100uF 160V M
C552	QETM1VM-108	E CAPACITOR	1000uF 35V M
C554	QETN2EM-475Z	E CAPACITOR	4.7uF 250V M
C555	QFLC2AJ-104Z	M CAPACITOR	0.1uF 100V J

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
C571	QETN1AM-107Z	E CAPACITOR	100uF 10V M	R165	NRSA63J-220X	MG RESISTOR	22Ω 1/16W J
C572	QETN1EM-476Z	E CAPACITOR	47uF 25V M	R166	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J
C581	QFVF1HJ-104Z	MF CAPACITOR	0.1uF 50V J	R301	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C652	NCB31HK-473X	C CAPACITOR	0.047uF 50V K	R302	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
C653	QETN1HM-106Z	E CAPACITOR	10uF 50V M	R303	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C654	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R304	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C655	QETN1HM-106Z	E CAPACITOR	10uF 50V M	R305	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C656	QENC1HM-105Z	BP E CAPACITOR	1uF 50V M	R306	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C657	QETN1EM-107Z	E CAPACITOR	100uF 25V M	R307	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J
C658	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R308	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C659	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	R312	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C663	NCB31HK-102X	C CAPACITOR	1000pF 50V K	R313	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C664	QETN1CM-107Z	E CAPACITOR	100uF 16V M	R314	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C665	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R321	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J
C705	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R322	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J
C706	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	R323	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C707	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R324	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
C708	QETN1AM-108Z	E CAPACITOR	1000uF 10V M	R326	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J
C709	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R327	NRSA63J-475X	MG RESISTOR	4.7MΩ 1/16W J
C710	QETN1CM-107Z	E CAPACITOR	100uF 16V M	R341	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C711	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R347	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J
C712	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R349	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
C713	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R351	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C716	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R352	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C717	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R353	NRSA63J-151X	MG RESISTOR	150Ω 1/16W J
C718	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R354	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C719	QETN1HM-105Z	E CAPACITOR	1uF 50V M	R355	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C720	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R356	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
C721	NCB31EK-333X	C CAPACITOR	0.033uF 25V K	R357	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C722	NDC31HJ-101X	C CAPACITOR	100pF 50V J	R358	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C724	NDC31HJ-560X	C CAPACITOR	56pF 50V J	R359	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J
C727	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	R360	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C728	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R361	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C729	NDC31HJ-181X	C CAPACITOR	180pF 50V J	R362	QRZ0107-152Z	C RESISTOR	1.5kΩ 1/2W K
C730	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R363	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C744	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	R364	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C805	QETN1CM-227Z	E CAPACITOR	220uF 16V M	R365	QRL029J-123	OMF RESISTOR	12kΩ 2W J
C806	QETN1CM-477Z	E CAPACITOR	470uF 16V M	R366	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C811	QETN1HM-106Z	E CAPACITOR	10uF 50V M	R367	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
C841	NCB31HK-152X	C CAPACITOR	1500pF 50V K	R368	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J
△C901	QFZ9073-224	MM CAPACITOR	0.22uF AC250V M	R374	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J
△C904	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R401	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J
△C905	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R421	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
△C907	QCZ9054-102	C CAPACITOR	1000pF AC250V Z	R423	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C909	QEZ0476-127	E CAPACITOR	120uF	R424	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
△C910	QFZ9072-104	MM CAPACITOR	0.1uF AC250V K	R425	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C922	QFLC1HJ-104Z	M CAPACITOR	0.1uF 50V J	R426	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C924	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	R429	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C925	QETN1HM-336Z	E CAPACITOR	33uF 50V M	R430	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J
C926	QFLC1HJ-332Z	M CAPACITOR	3300pF 50V J	R431	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W J
C927	QFLC1HJ-104Z	M CAPACITOR	0.1uF 50V J	R432	QRE121J-3R9Y	C RESISTOR	3.9Ω 1/2W J
C929	QFKA2JK-103	MM CAPACITOR	0.01uF 630V K	R433	QRE121J-2R7Y	C RESISTOR	2.7Ω 1/2W J
C931	QCZ0364-681	C CAPACITOR	680pF 2kV K	R436	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J
C932	NDC31HJ-221X	C CAPACITOR	220pF 50V J	R440	QRE121J-471Y	C RESISTOR	470Ω 1/2W J
C941	QCZ0364-561	C CAPACITOR	560pF 2kV K	R441	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
C942	QEZ0203-107	E CAPACITOR	100uF 160V M	R442	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
C944	QCB32HK-222Z	C CAPACITOR	2200pF 500V K	R443	QRE121J-1R0Y	C RESISTOR	1Ω 1/2W J
C945	QEHR1EM-108Z	E CAPACITOR	1000uF 25V M	R453	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J
C946	QETN1EM-108Z	E CAPACITOR	1000uF 25V M	R502	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J
C947	QCB32HK-222Z	C CAPACITOR	2200pF 500V K	R503	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J
C948	QETN1EM-108Z	E CAPACITOR	1000uF 25V M	R521	QRE121J-560Y	C RESISTOR	56Ω 1/2W J
C949	NDC31HJ-471X	C CAPACITOR	470pF 50V J	R525	QRL029J-330	OMF RESISTOR	33Ω 2W J
C976	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R526	QRE121J-271Y	C RESISTOR	270Ω 1/2W J
C977	QETN1CM-227Z	E CAPACITOR	220uF 16V M	R528	QRE121J-471Y	C RESISTOR	470Ω 1/2W J
C978	QETN1EM-227Z	E CAPACITOR	220uF 25V M	R529	QRL039J-681	OMF RESISTOR	680Ω 3W J
C979	QETN1AM-227Z	E CAPACITOR	220uF 10V M	R531	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
△C991	QCZ9071-102	C CAPACITOR	1000pF AC400V M	R532	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
△C992	QCZ9071-102	C CAPACITOR	1000pF AC400V M	△R551	QRX029J-R47	MF RESISTOR	0.47Ω 2W J
△C993	QCZ9071-102	C CAPACITOR	1000pF AC400V M	R552	QRJ146J-2R2X	UNF C RESISTOR	2.2Ω 1/4W J
				R554	QRE121J-152Y	C RESISTOR	1.5kΩ 1/2W J
R002	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R571	QRE121J-222Y	C RESISTOR	2.2kΩ 1/2W J
R003	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R573	QRT029J-1R5	MF RESISTOR	1.5Ω 2W J
R004	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	R574	QRT029J-1R5	MF RESISTOR	1.5Ω 2W J
R102	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	R576	QRE121J-223Y	C RESISTOR	22kΩ 1/2W J
R103	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	R577	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J
R109	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	R578	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J
R110	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	R581	QRE121J-182Y	C RESISTOR	1.8kΩ 1/2W J
R111	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	R582	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J
R112	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	R583	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J
R113	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	R651	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J
R120	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	R652	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J
R121	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R653	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
R159	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J	R654	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J
R161	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	R655	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J
R162	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	R656	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J
R163	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	R657	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J
R164	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	R658	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J

△Ref No.	Part No.	Part Name	Description Local	△Ref No.	Part No.	Part Name	Description Local
R659	QRE121J-4R7Y	C RESISTOR	4.7Ω 1/2W J				
R660	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	CF161	QAX0694-001Z	C FILTER	5.742MHz
R661	QRE121J-271Y	C RESISTOR	270Ω 1/2W J	CF162	QAX0694-001Z	C FILTER	5.742MHz
R662	QRE121J-271Y	C RESISTOR	270Ω 1/2W J	△CP981	ICP-N50-T	IC PROTECTOR	2.0A
R664	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	△CP982	ICP-N75-T	IC PROTECTOR	2.7A
R665	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	△F901	QMF51E2-3R15-S	FUSE	3.15A AC250V
R666	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	J002	QNN0384-001	PIN JACK	VIDEO AUDIO IN(OUT)(REAR)
R667	QRE121J-101Y	C RESISTOR	100Ω 1/2W J	J003	QNN0281-003	PIN JACK	VIDEO IN(FRONT)
R668	QRT029J-5R6	MF RESISTOR	5.6Ω 2W J	J004	QNN0281-002	PIN JACK	AUDIO IN(FRONT)
R706	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	J005	QNS0197-001	3.5 JACK	HEADPHONE
R707	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	K351	QQR0621-002Z	FERRITE BEADS	
R708	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	K421	QQR1113-001Z	FERRITE BEADS	
R709	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K901	QQR1113-001Z	FERRITE BEADS	
R710	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K902	QQR1113-001Z	FERRITE BEADS	
R711	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K941	QQR1113-001Z	FERRITE BEADS	
R712	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K942	QQR1113-001Z	FERRITE BEADS	
R713	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	K943	QQR1113-001Z	FERRITE BEADS	
R714	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	△LF901	QQR0527-002	LINE FILTER	
R715	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	S701	QSW0619-003Z	PUSH SWITCH	CH+
R716	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	S702	QSW0619-003Z	PUSH SWITCH	CH-
R718	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	S703	QSW0619-003Z	PUSH SWITCH	VOL+
R719	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	S704	QSW0619-003Z	PUSH SWITCH	VOL-
R720	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	S705	QSW0619-003Z	PUSH SWITCH	MENU
R721	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	△S901	QSW0750-001	PUSH SWITCH	POWER
R723	QRL039J-270	OMF RESISTOR	27Ω 3W J	SF102	QAX0666-002	SAW FILTER	
R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	SF122	QAX0325-001	SAW FILTER	
R726	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	△SK351	QNZ0536-002	CRT SOCKET	
R727	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	△TH901	QAD0121-9R0	P THERMISTOR	9Ω
R728	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	TU001	QAU0466-001	TUNER	
R729	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	△VA901	QAF0072-621	VARISTOR	620V
R730	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	X301	QAX0705-001Z	CRYSTAL	4.433619MHz
R731	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	X302	QAX0860-001Z	CRYSTAL	3.579545MHz
R736	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	X701	QAX0884-001	C RESONATOR	12.000MHz
R737	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		LC30349-001A-H	LED HOLDER	
R738	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R739	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R740	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J				
R741	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J				
R742	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J				
R746	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R748	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J				
R749	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J				
R771	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J				
R772	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J				
R773	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J				
R796	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J				
R797	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J				
R802	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J				
R806	QRE121J-271Y	C RESISTOR	270Ω 1/2W J				
R807	NRSA63J-680X	MG RESISTOR	68Ω 1/16W J				
R810	QRG01GJ-560	OMF RESISTOR	56Ω 1W J				
R811	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J				
R815	QRE121J-181Y	C RESISTOR	180Ω 1/2W J				
R816	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J				
R817	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J				
R901	QRF104K-3R9	UNF WW RESISTOR	3.9Ω 10W K				
R903	QRL029J-104	OMF RESISTOR	100kΩ 2W J				
R904	QRL039J-151	OMF RESISTOR	150Ω 3W J				
R906	QRL029J-104	OMF RESISTOR	100kΩ 2W J				
R921	QRE121J-1R8Y	C RESISTOR	1.8Ω 1/2W J				
R922	QRE121J-221Y	C RESISTOR	220Ω 1/2W J				
R923	QRZ0237-R18	UNF WW RESISTOR	0.18Ω 3W J				
R924	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J				
R925	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J				
R928	QRL039J-683	OMF RESISTOR	68kΩ 3W J				
R933	QRE121J-4R7Y	C RESISTOR	4.7Ω 1/2W J				
R934	NRSA63J-683X	MG RESISTOR	68kΩ 1/16W J				
R935	QRE121J-392Y	C RESISTOR	3.9kΩ 1/2W J				
R974	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J				
R976	QRL029J-120	OMF RESISTOR	12Ω 2W J				
R977	QRE121J-122Y	C RESISTOR	1.2kΩ 1/2W J				
R978	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J				
R979	QRL039J-470	OMF RESISTOR	47Ω 3W J				
R980	QRL029J-153	OMF RESISTOR	15kΩ 2W J				
△R991	QRZ9046-825Z	C RESISTOR	8.2MΩ 1/2W K				
L001	QQL244K-8R2Z	PEAKING COIL	8.2uH K				
L101	QQL244J-2R2Z	PEAKING COIL	2.2uH J				
L103	QQL244K-8R2Z	PEAKING COIL	8.2uH K				
L522	QQR1005-002	LINEARITY COIL					
L551	QQLZ026-320	COIL	32uH ±7%				
L701	QQL244J-5R6Z	COIL	5.6uH J				
L941	QQL26AK-820Z	CHOKE COIL	82uH K				
L942	QQL244J-4R7Z	PEAKING COIL	4.7uH J				
L943	QQL244J-4R7Z	PEAKING COIL	4.7uH J				
T501	QQR1244-001	DRIVE TRANSF					
△T921	QQS0213-001	SW TRANSF					

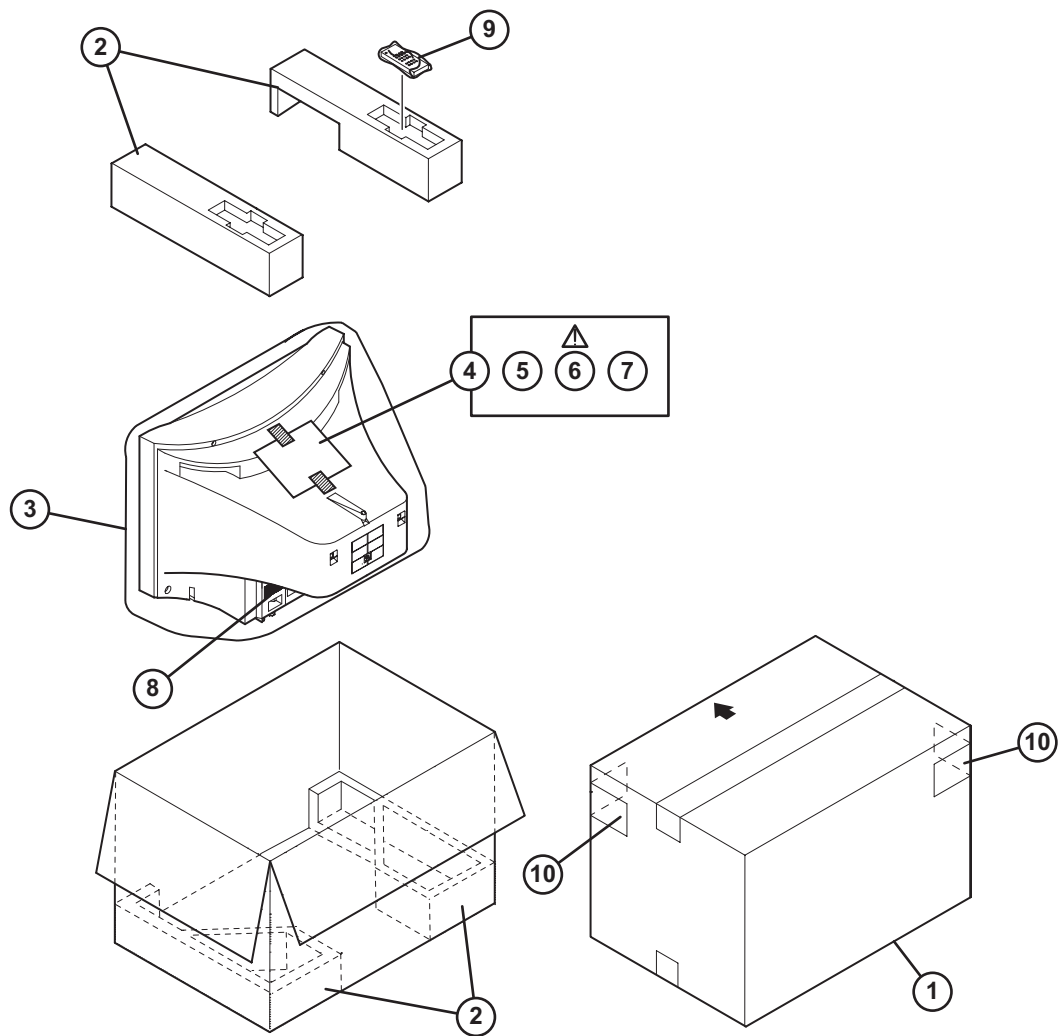
△ Ref No.	Part No.	Part Name	Description	Local
	R56-1400	BATTERY COVER		

This exploded view diagram illustrates the assembly of the HP LaserJet printer. The components are labeled as follows:

- 1**: The main printer body.
- 2**: The paper tray assembly, shown in two positions: partially inserted and fully inserted into the main body.
- 3**: The top cover assembly, shown being placed onto the main body.
- 4**: A small rectangular component, likely a sensor or switch, shown being inserted into the top cover.
- 5**: A small rectangular component, likely a sensor or switch, shown being inserted into the top cover.
- 6**: A small rectangular component, likely a sensor or switch, shown being inserted into the top cover.
- 7**: A small rectangular component, likely a sensor or switch, shown being inserted into the top cover.
- 8**: The main body assembly, shown with the paper tray and top cover attached.
- 9**: A small rectangular component, likely a sensor or switch, shown being inserted into the main body.
- 10**: The front panel assembly, shown being attached to the front of the main body.

△	Ref.No.	Part No.	Part Name	Description	Local
	1	GG10285-012A-H	PACKING CASE		
	2	GG10422-001A-H	CUSHION ASS'Y	5pcs in 1set	
	3	GG30097-003A-H	POLY BAG		
	4	GG30096-001A-H	POLY BAG		
	5	-----	BATTERY	1.5V AA/R6 (x2)	
△	6	GGT0111-001A-H	INST BOOK		
	7	ATEAB001-00A	MATCHING BOX		
	8	GG40042-001A-H	CORD CLAMP R/C		
	9	RM-C1121-1H	REMOCON UNIT		
	10	GG30147-001B-H	CORNER LABEL	2pcs in 1set	

PACKING [AV-V2160/B]



PACKING PARTS LIST [AV-V2160/B]

△	Ref.No.	Part No.	Part Name	Description	Local
	1	GG10285-009B-H	PACKING CASE		
	2	GG10387-001B-H	CUSHION ASS'Y	4pcs in 1set	
	3	GG30097-003A-H	POLY BAG		
	4	GG30096-001A-H	POLY BAG		
	5	-----	BATTERY	1.5V AA/R6 (x2)	
△	6	GGT0111-001B-H	INST BOOK		
	7	ATEAB001-00A	MATCHING BOX		
	8	GG40042-001A-H	CORD CLAMP R/C		
	9	RM-C1121-1H	REMOCON UNIT		
	10	GG30147-001B-H	CORNER LABEL	2pcs in 1set	

JVC

SCHEMATIC DIAGRAMS

COLOUR TELEVISION

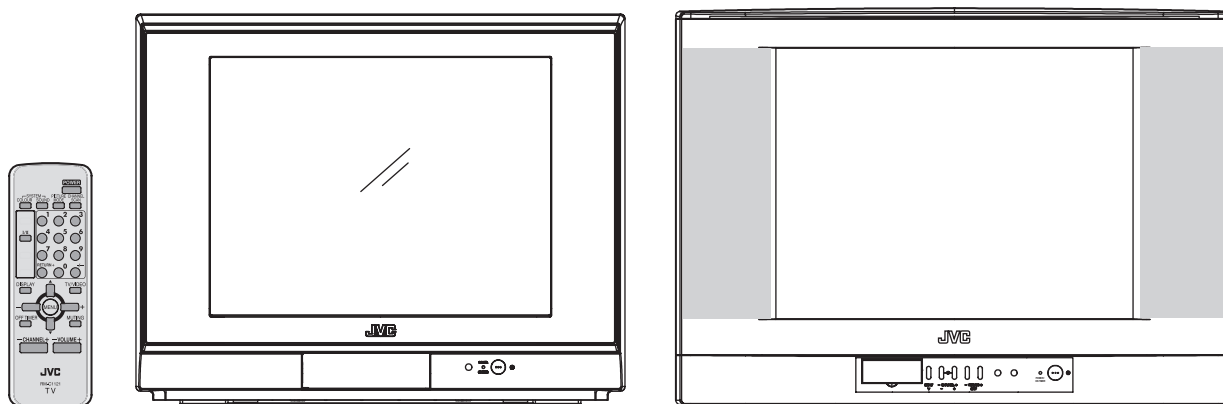
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AV-V2160/B

CD-ROM No.SML200609

BASIC CHASSIS

CG4



AV-21B116/B, AV-V2160/B

STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the $\triangle$ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- (1)Input signal : Colour bar signal
- (2)Setting positions of each knob/button and variable resistor : Original setting position when shipped
- (3)Internal resistance of tester : DC 20k Ω /V
- (4)Oscilloscope sweeping time : H $\Rightarrow$ 20 μ s / div
: V $\Rightarrow$ 5ms / div
: Others $\Rightarrow$ Sweeping time is specified
- (5)Voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R1209 $\rightarrow$ R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

● Resistance value

- No unit : [Ω]
- K : [k Ω]
- M : [M Ω]

● Rated allowable power

- No indication : 1/16 [W]
- Others : As specified

● Type

- No indication : Carbon resistor
- OMR : Oxide metal film resistor
- MFR : Metal film resistor
- MPR : Metal plate resistor
- UNFR : Uninflammable resistor
- FR : Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

● Capacitance value

- 1 or higher : [pF]
- less than 1 : [μ F]

● Withstand voltage

- No indication : DC50[V]
- Others : DC withstand voltage [V]
- AC indicated : AC withstand voltage [V]

* Electrolytic Capacitors

47/50[Example]: Capacitance value [μ F]/withstand voltage[V]

●Type

- No indication : Ceramic capacitor
- MM : Metalized mylar capacitor
- PP : Polypropylene capacitor
- MPP : Metalized polypropylene capacitor
- MF : Metalized film capacitor
- TF : Thin film capacitor
- BP : Bipolar electrolytic capacitor
- TAN : Tantalum capacitor

(3)Coils

- No unit : [μ H]
- Others : As specified

(4)Power Supply

-  : B1
-  : B2 (12V)
-  : 9V
-  : 5V

* Respective voltage values are indicated

(5)Test point

-  : Test point
-  : Only test point display

(6)Connecting method

-  : Connector
-  : Wrapping or soldering
-  : Receptacle

(7)Ground symbol

-  : LIVE side ground
-  : ISOLATED(NEUTRAL) side ground
-  : EARTH ground
-  : DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : () side GND and the ISOLATED(NEUTRAL) : () side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

NOTE

◆ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.

When ordering parts, please use the numbers that appear in the Parts List.

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MAIN PWB PATTERN [AV-21B116/B]

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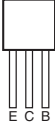
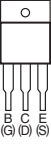
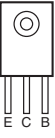
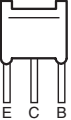
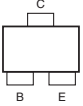
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USING P.W. BOARD

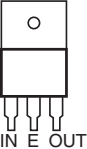
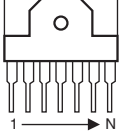
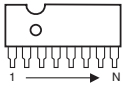
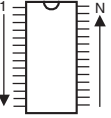
PWB ASS'Y name	AV-21B116/B	AV-V2160/B
MAIN P.W. BOARD	SCG-1550A-BK	SCG-1557A-BK

SEMICONDUCTOR SHAPES

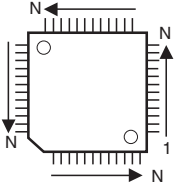
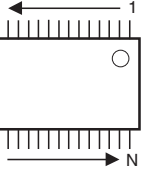
TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

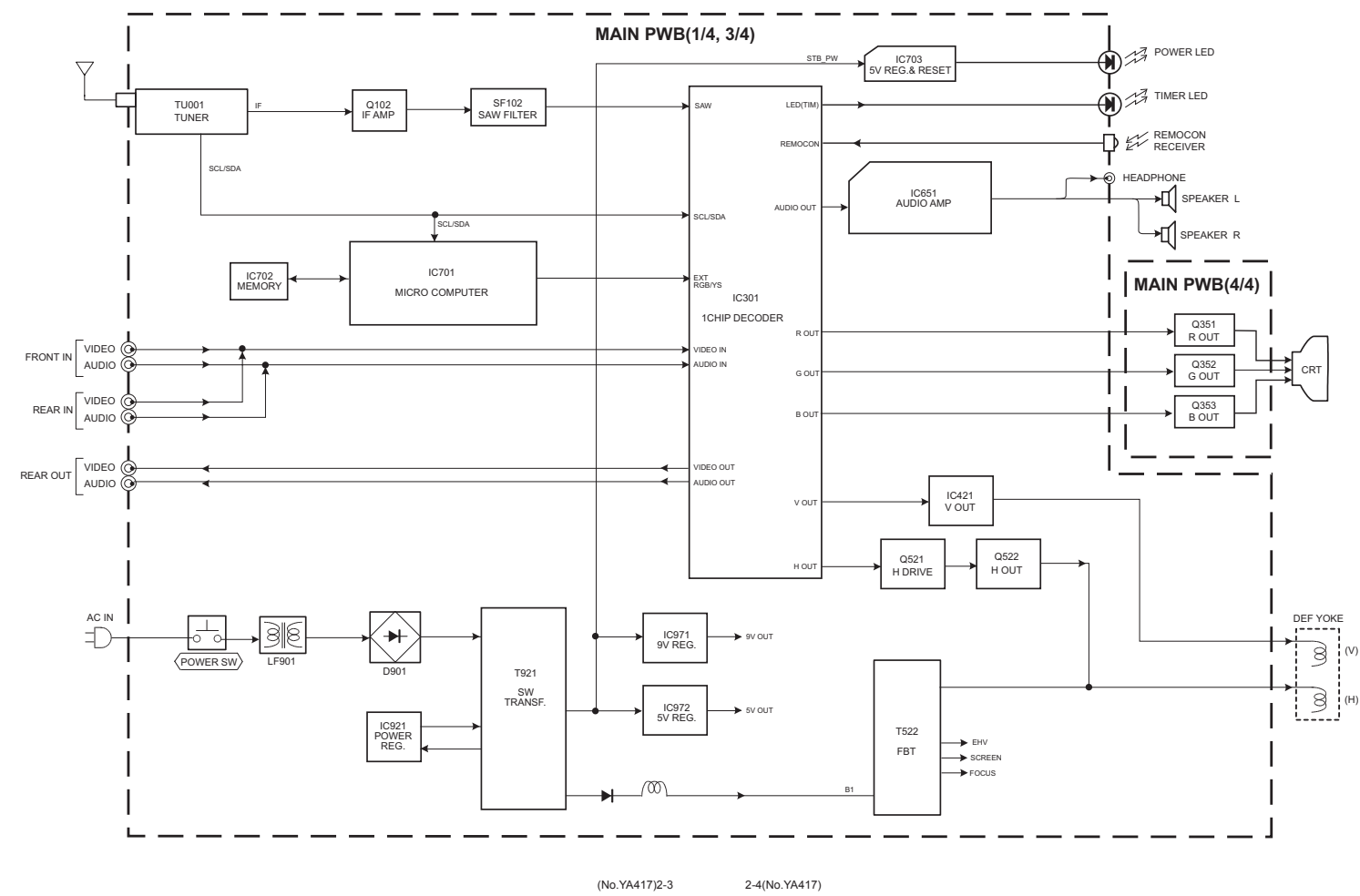
IC

BOTTOM VIEW	FRONT VIEW			TOP VIEW
				

CHIP IC

TOP VIEW		
		

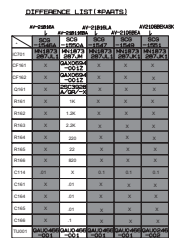
BLOCK DIAGRAM



MAIN PWB CIRCUIT DIAGRAM [AV-21B116/B](1/4)(2/4) SHEET 1

MAIN PWB ASS'Y(2/4) (FRONT LED)

SCG-1550A-BK

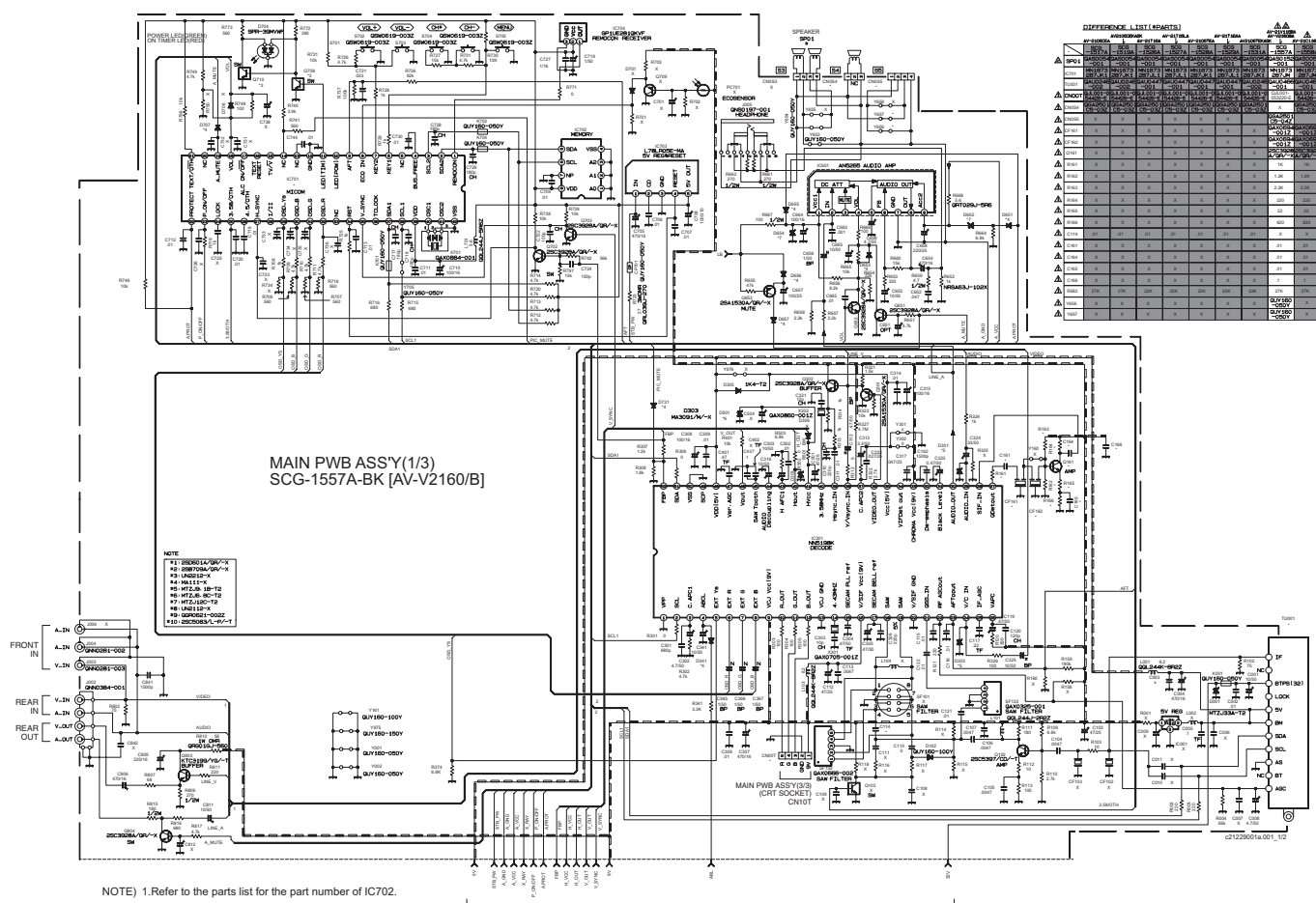


NOTE) 1.Refer to the parts list for the part number of IC702.

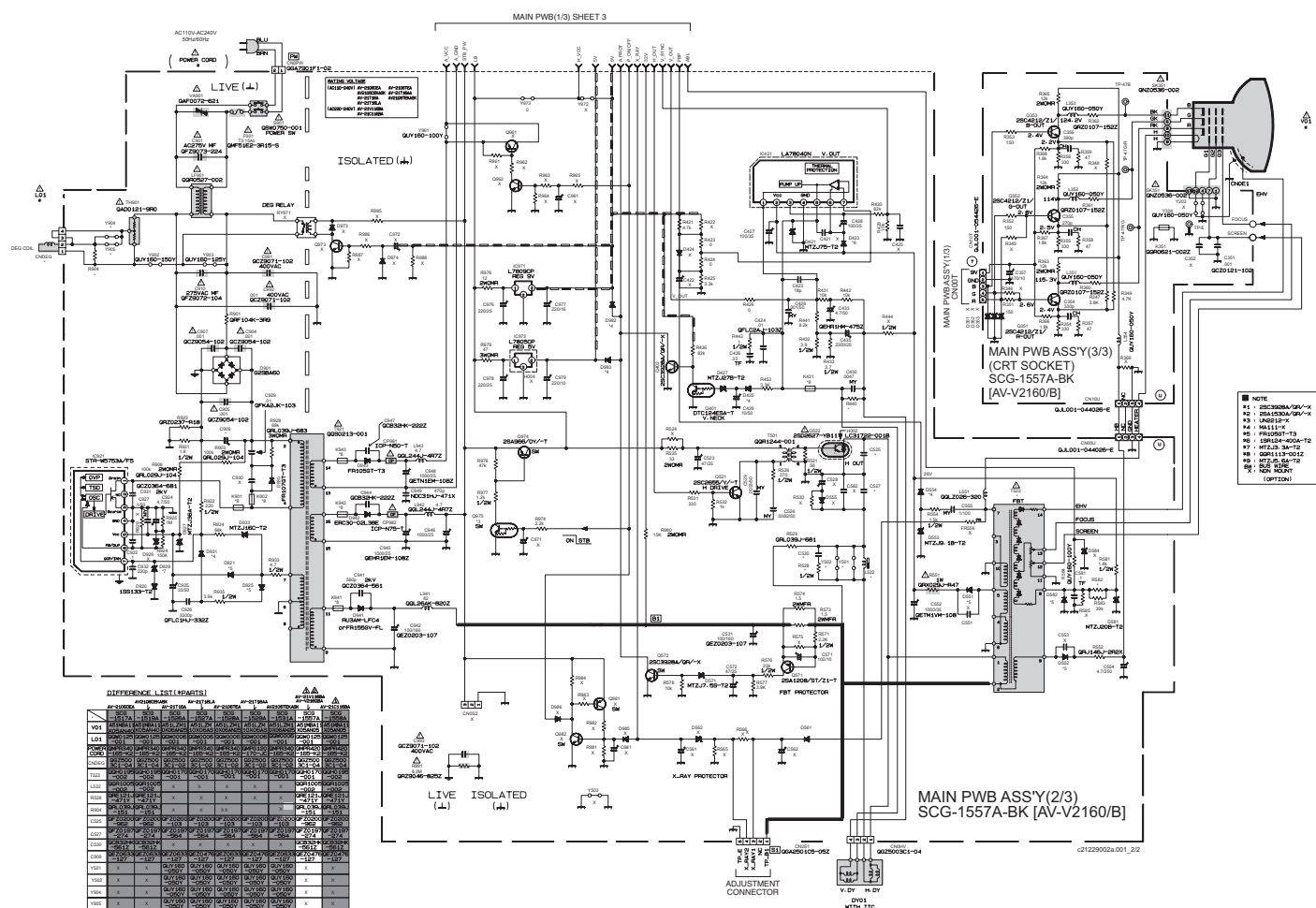
MAIN PWB(3/4) SHEET2

(No.YA417)2-5

2-6(No.YA417)



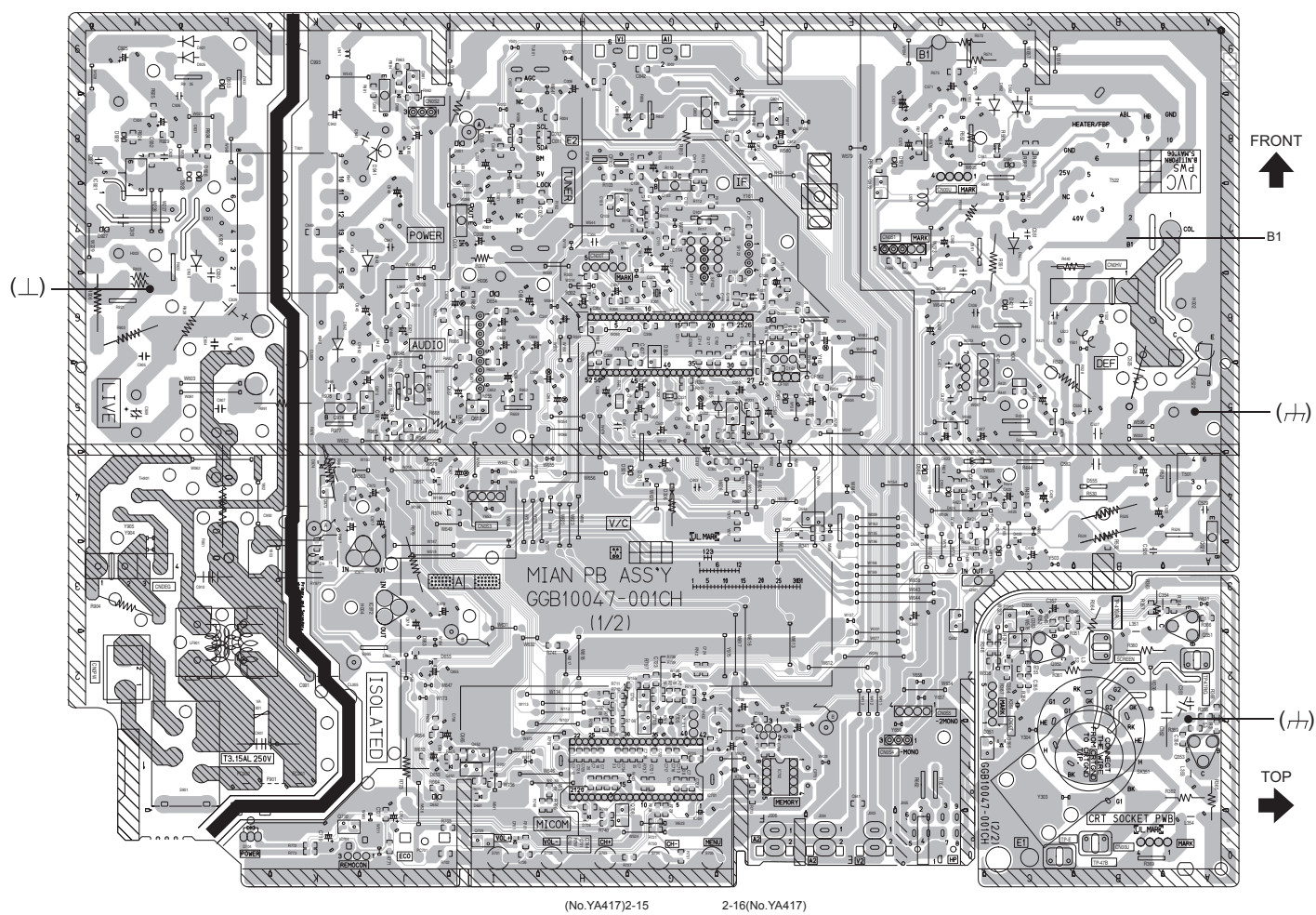
NOTE) 1.Refer to the parts list for the part number of IC702.



MAIN PWB PATTERN [AV-21B116/B]



2-14(No.YA417)



VOLTAGE CHARTS

[AV-21B116/B]

-MAIN PWB-		-ROCK PWB-		-ROCK PWB-		-FRONT LEB PWB-		-CRT SOCKET PWB-	
ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)
IC201		29	0	E	15.1	IC704		Q201	
1	0	27	4.1	C	0	1	4.5	E	2.5
2	4.4	28	4.9	B	15.2	2	4.9	C	125.9
3	5.3	29	0	Q702		3	0	B	3.2
4	3.4	30	0	E	0	Q708		Q202	
5	0	31	0	C	4.2	E	0	E	2.5
6	5.0	32	0	B	0	C	2.0	C	123.3
7	5.0	33	0	Q703		B	0	B	3.3
8	5.2	34	4.0	E	0	Q710		Q202	2.5
9	9.0	35	4.7	C	4.8	E	0	E	2.5
10	3.0	36	4.9	B	0.1	C	0.1	C	128.5
11	3.0	37	4.4	Q803		B	0	B	3.2
12	3.0	38	4.4	E	0				
13	0	39	4.9	C	8.1				
14	2.8	40	0	B	3.7				
15	4.2	41	2.1	Q804					
16	9.0	42	0	E	0				
17	3.8	IC702		C	0				
18	2.8	1	0	B	0.1				
19	2.8	2	0	Q874					
20	0	3	0	E	15.3				
21	0	4	0	C	15.1				
22	0	5	4.9	B	0				
23	4.4	6	4.9	Q875					
24	3.2	7	0	E	0				
25	3.0	8	4.9	C	0.1				
26	3.2	IC705		B	4.5				
27	4.2	1	14.4	TU801					
28	3.7	2	5.8	1	4.9				
29	4.1	3	0	2	NC				
30	3.9	4	4.9	3	0				
31	4.2	5	4.9	4	4.4				
32	4.2	6	0	5	0				
33	9.0	1	314.0	6	4.5				
34	4.0	2	NC	7	4.9				
35	4.7	3	0	8	0				
36	4.0	4	0	9	31.3				
37	6.1	5	31.9	10	NC				
38	4.2	6	0	11	0				
39	4.3	7							
40	2.7	IC871		3.7					
41	6.2	1	12.8						
42	1.0	2	8.0						
43	0.7	3	0						
44	1.0	IC872							
45	1.2	1	3.2						
46	3.1	2	4.9						
47	5.4	3	0						
48	5.0	Q102							
49	0.7	E	0						
50	0	C	8.0						
51	4.4	B	2.3						
52	0.7	Q141							
IC421		E	2.5						
1	3.7	C	8.3						
2	26.0	B	3.2						
3	7.0	Q101							
4	0	E	4.6						
5	13.8	C	0						
6	26.3	B	4.0						
7	3.7	Q102							
IC551		E	4.0						
1	12.5	C	4.0						
2	5.6	B	4.0						
3	0	E	0						
4	2.4	E	4.0						
5	9.4	C	9.0						
6	9.6	B	5.4						
7	0	Q402							
8	9.7	E	0						
9	9.9	C	4.9						
IC701		B	0						
1	4.5	Q421							
2	4.9	E	0						
3	0	C	9.7						
4	0	B	0.2						
5	0	Q402							
6	4.9	E	0						
7	4.9	C	115.5						
8	2.3	B	0						
9	3.3	Q477							
10	4.9	E	115.5						
11	0	C	0						
12	0	B	115.1						
13	2.4	Q472							
14	0.1	E	0						
15	1.8	C	4.9						
16	1.8	B	0						
17	0	Q451							
18	0.8	E	0						
19	0	C	0.3						
20	4.9	B	0						
21	4.9	Q452							
22	4.9	E	0						
23	4.9	C	1.0						
24	2.3	B	0.6						
25	4.9	Q453							

(No.YA417)2-17

[AV-V2160/B]

-MAIN PWB-		-ROCK PWB-		-ROCK PWB-		-FRONT LEB PWB-		-CRT SOCKET PWB-	
ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)	ROCK PWB NO.	DC (V)
IC101		39	0	E	0	IC201		Q101	
1	0	27	4.1	C	1.0	1	0	E	2.5
2	4.4	28	4.9	B	0.6	2	6.3	C	125.9
3	6.3	29	0	Q203		3	0	B	3.2
4	3.4	30	0	E	15.1	4	3.4	Q102	
5	0	31	0	C	0	5	0	E	2.5
6	5.0	32	0	B	15.2	6	5.0	C	123.3
7	5.0	33	0	Q102		7	5.0	B	3.2
8	5.2	34	4.0	E	0	8	5.2	Q103	
9	9.0	35	4.7	C	4.2	9	9.0	E	2.5
10	3.0	36	4.9	B	0	10	3.0	C	128.5
11	3.0	37	4.4	E	0	11	3.0	B	3.2
12	3.0	38	4.4	E	0	12	3.0	C	4.8
13	0	39	4.9	C	4.8	13	0	B	0.1
14	2.8	40	0	B	0.1	14	2.8	Q108	
15	4.2	41	2.1	Q108		15	4.2	C	2.0
16	9.0	42	0	E	0	16	9.0	B	0
17	3.8	IC702		C	2.0	17	3.8	Q109	
18	2.8	1	0	B	0	18	2.8	E	0
19	2.8	2	0	Q110		19	2.8	C	0
20	0	3	0	E	0	20	0	B	0
21	0	4	0	C	0.1	21	0	E	0
22	0	5	4.9	B	0	22	0	C	0
23	4.4	6	4.9	Q203		23	4.4	E	0
24	3.2	7	0	E	0	24	3.2	C	8.1
25	3.0	8	4.9	C	8.1	25	3.0	B	4.7
26	3.2	IC703		B	4.7	26	3.2	Q103	
27	4.2	1	14.4	Q204		27	4.2	E	0
28	3.7	2	5.8	1	4.9	28	3.7	C	0
29	4.1	3	0	2	NC	29	4.1	B	0.1
30	3.9	4	4.9	3	0	30	3.9	C	0
31	4.2	5	4.9	4	4.4	31	4.2	E	0
32	4.2	6	0	5	0	32	4.2	C	15.3
33	9.0	1	314.0	6	4.5	33	9.0	E	15.3
34	4.0	2	NC	7	4.9	34	4.0	B	0
35	4.7	3	0	8	0	35	4.7	C	0
36	4.0	4	0	9	31.3	36	4.0	E	0
37	6.1	5	31.9	10	NC	37	6.1	C	0.1
38	4.2	6	0	11	0	38	4.2	B	4.9
39	4.3	7				39	4.3	C	0
40	2.7	IC871		3.7		40	2.7	E	0
41	6.2	1	12.8			41	6.2	C	1
42	1.0	2	8.0			42	1.0	E	0
43	0.7	3	0			43	0.7	C	0
44	1.0	IC872				44	1.0	E	0
45	1.2	1	3.2			45	1.2	C	4.5
46	3.1	2	4.9			46	3.1	E	4.2
47	5.4	3	0			47	5.4	C	0
48	5.0	IC872				48	5.0	E	31.3
49	0.7	1	9.2			49	0.7	C	19
50	0	2	4.9			50	0	E	11
51	4.4	3	0			51	4.4	C	0
52	0.7	Q102				52	0.7	E	0
IC421		E	0			IC421		C	0
1	3.7	C	8.0			1	3.7	E	0
2	26.0	B	2.3			2	26.0	C	0
3	7.0	Q101				3	7.0	E	2.5
4	0	E	4.6			4	0	C	8.3
5	13.8	C	0			5	13.8	B	3.2
6	26.3	B	4.0			6	26.3	E	0
7	3.7	Q101				7	3.7	C	0
IC551		E	4.6			IC551		E	4.6
1	12.5	C	0			1	12.5	C	0
2	5.6	B	4.0			2	5.6	E	0
3	0	E	0			3	0	C	9.0
4	2.4	E	4.0			4	2.4	B	4.6
5	9.4	C	9.0			5	9.4	E	0
6	9.6	B	5.4			6	9.6	C	0
7	0	Q401				7	0	E	0
8	9.7	E	0			8	9.7	C	0
9	9.9	C	0			9	9.9	E	5.4
IC701		B	0			IC701		C	0
1	4.5	Q402				1	4.5	E	0
2	4.9	E	0			2	4.9	C	4.9
3	0	C	9.7			3	0	E	0
4	0	B	0.2			4	0	C	0
5	0	Q401				5	0	E	0
6	4.9	E	0			6	4.9	C	9.7
7	4.9	C	115.5			7	4.9	B	0.3
8	2.3	B	0			8	2.3	E	0
9	3.3	Q477				9	3.3	C	0
10	4.9	E	115.5			10	4.9	E	0
11	0	C	0			11	0	C	115.3
12	0	B	0			12	0	E	0
13	2.4	Q471				13	2.4	C	0
14	0.1	E	0			14	0.1	E	115.5
15	1.8	C	0			15	1.8	C	0
16	1.8	B	0			16	1.8	E	115.1
17	0	Q451				17	0	C	0
18	0.8	E	0			18	0.8	E	0
19	0	C	0			19	0	C	4.3
20	4.9	B	0			20	4.9	B	0
21	4.9	Q461				21	4.9	E	0
22	4.9	C	0			22	4.9	C	0
23	4.9	C	0.3			23	4.9	E	0
24	2.3	B	0			24	2.3	C	0
25	4.0	Q462				25	4.0	E	0

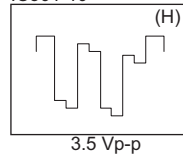
WAVEFORMS

[AV-21B116/B]

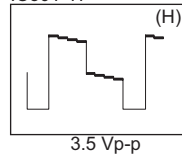
-MAIN PWB-

(SHEET1)

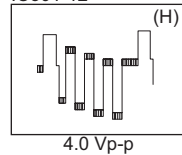
IC301-10



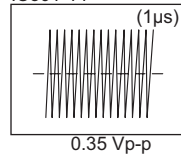
IC301-11



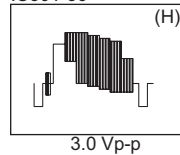
IC301-12



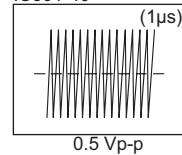
IC301-14



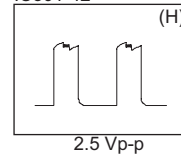
IC301-36



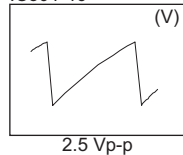
IC301-40



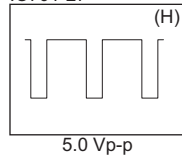
IC301-42



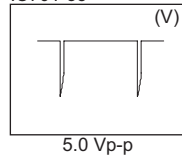
IC301-46



IC701-27

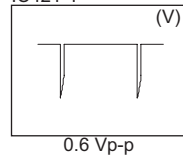


IC701-35

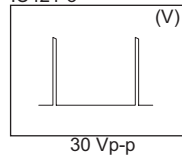


(SHEET2)

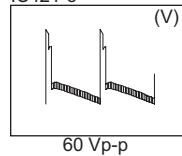
IC421-1



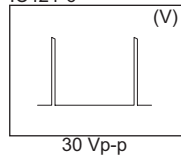
IC421-3



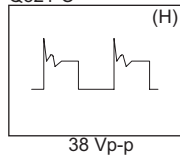
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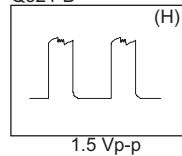
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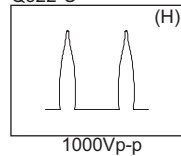
Q521-C



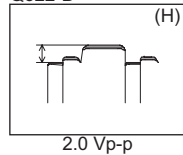
Q521-B



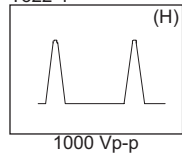
Q522-C



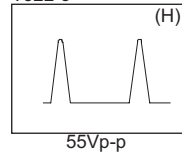
Q522-B



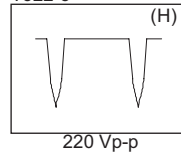
T522-1



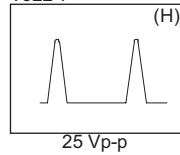
T522-3



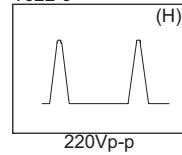
T522-5



T522-7



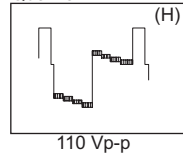
T522-9



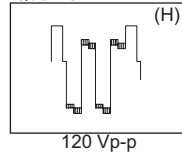
-CRT SOCKET PWB-

(SHEET2)

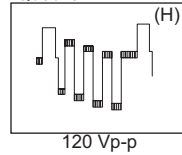
Q351-C



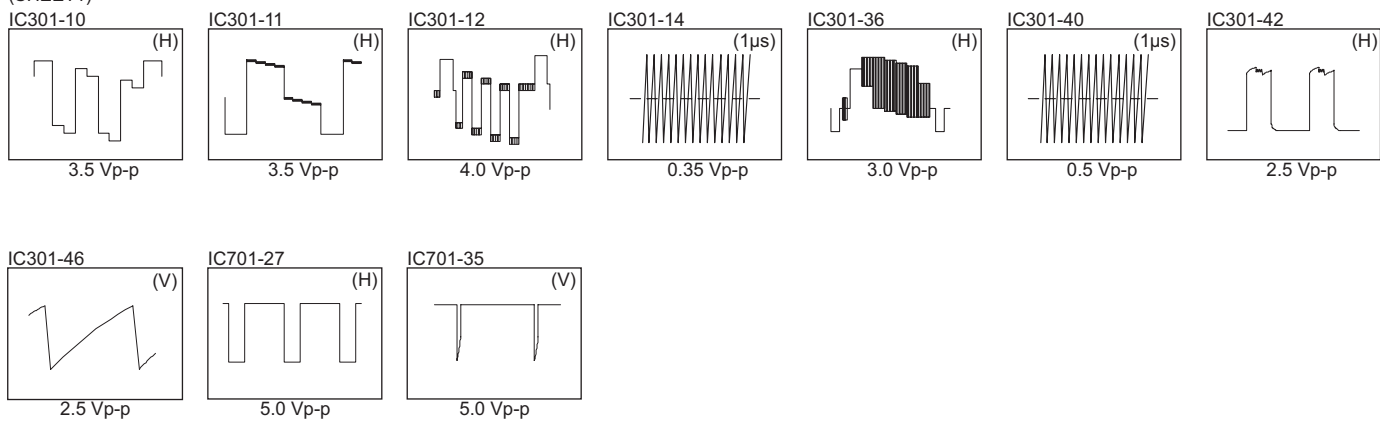
Q352-C



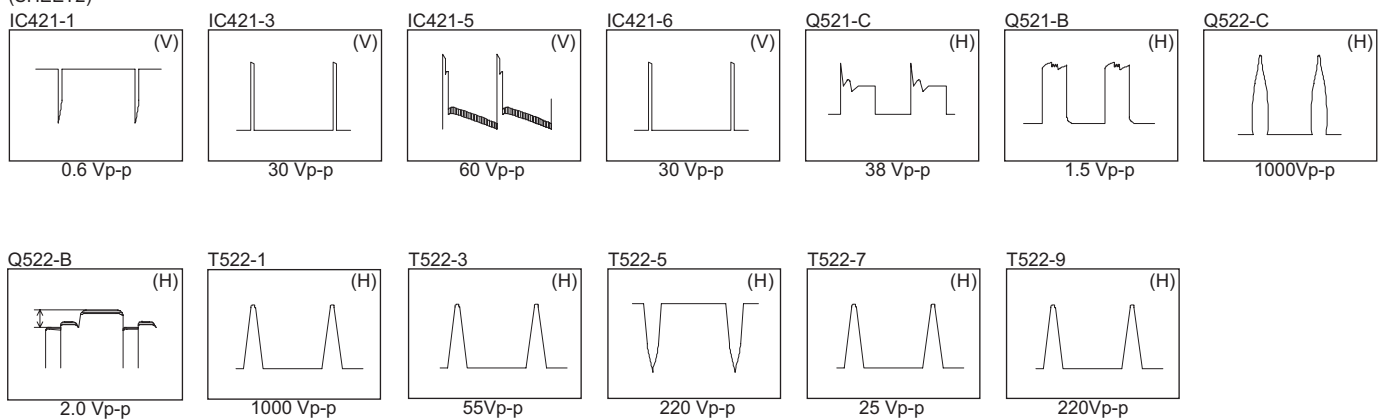
Q353-C



[AV-V2160/B]
-MAIN PWB-
 (SHEET1)

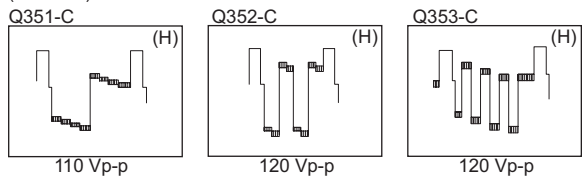


(SHEET2)



-CRT SOCKET PWB-

(SHEET2)





Victor Company of Japan, Limited
Display Category 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama-city, kanagawa-prefecture, 221-8528, Japan

(No.YA417)



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